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602-771-1601
<http://www.azgs.az.gov>
inquiries@azgs.az.gov

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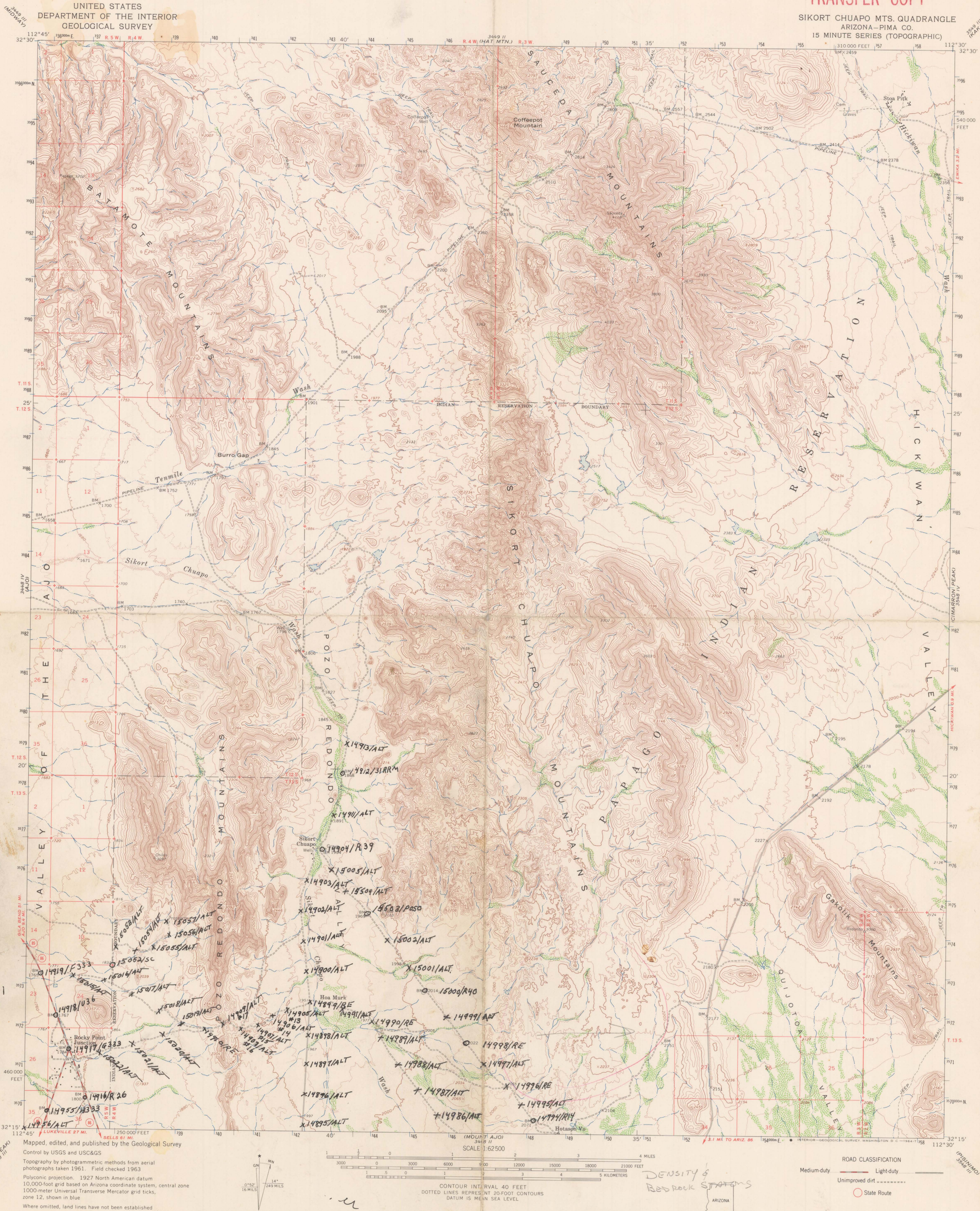
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TRANSFER COPY

SIKORT CHUAPO MTS., ARIZ.

1962

AMS 3448 1—SERIES V798

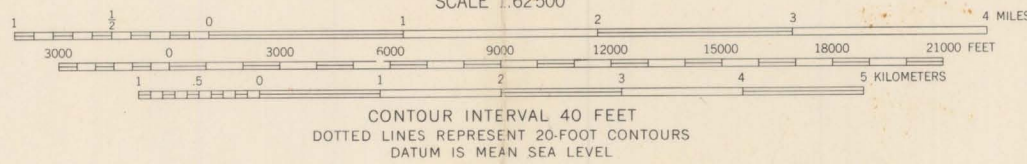
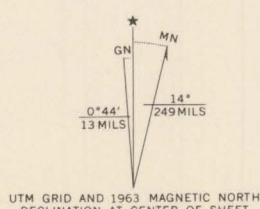
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

TRANSFER COPY

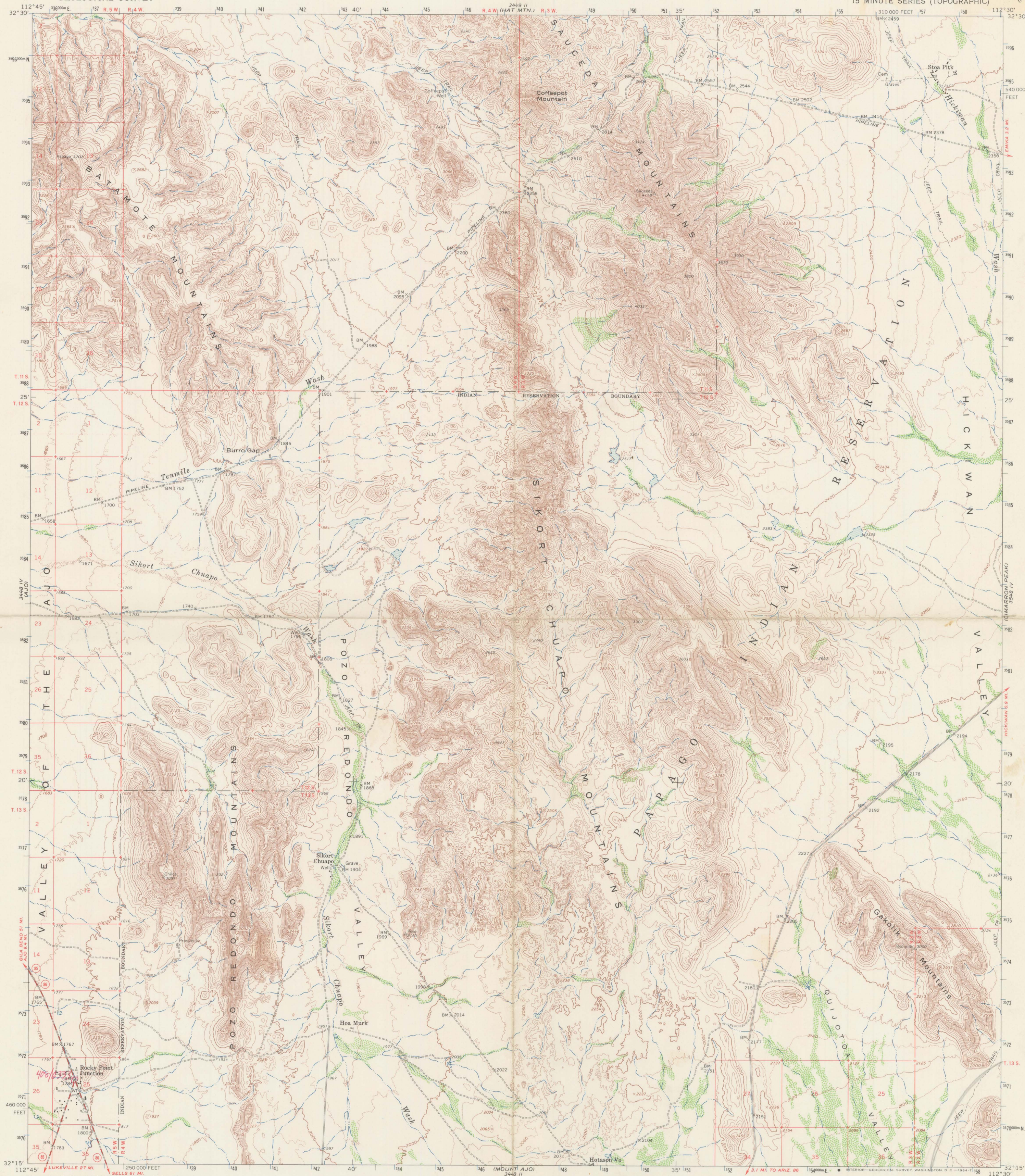
CIMARRON PEAK QUADRANGLE
ARIZONA-PIMA CO.
15 MINUTE SERIES (TOPOGRAPHIC)



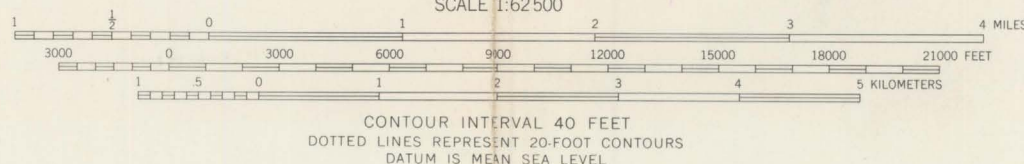
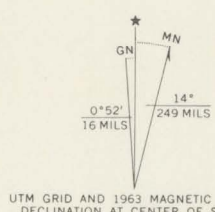
Mapped, edited, and published by the Geological Survey
Control by USGS and USC&GS
Topography by photogrammetric methods from aerial
photographs taken 1961. Field checked 1963
Polyconic projection. 1927 North American datum
100,000-foot grid based on Arizona coordinate system, central zone
1000-meter Universal Transverse Mercator grid ticks,
zone 12, shown in blue
Where omitted, land lines have not been established



ROAD CLASSIFICATION
Light-duty ————— Unimproved dirt - - - - -
TRANSFER COPY CIMARRON PEAK, ARIZ.
N3215-W11215/15
1963
AMS 3548 IV-SERIES V798



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1000-meter Universal Transverse Mercator grid ticks,
zone 12, shown in blue
Where omitted, land lines have not been established



ROAD CLASSIFICATION
Medium-duty — Light-duty
Unimproved dirt —
State Route

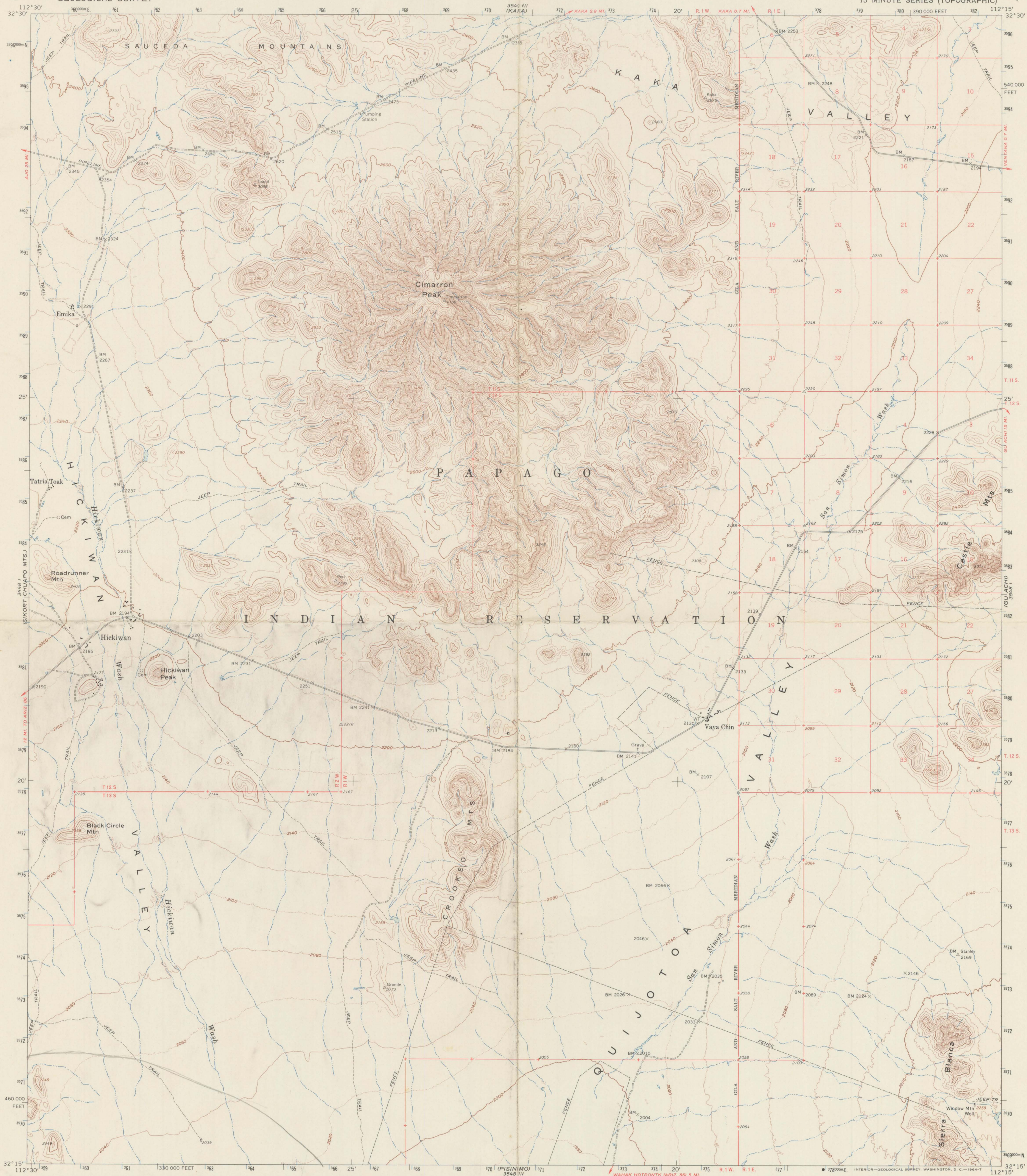
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER 25, COLORADO OR WASHINGTON 25, D. C.
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

FIELD COPY SIKORT CHUAPO MTS. ARIZ.
N3215-W11230/15
1963
AMS 3448 I-SERIES V798

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FIELD COPY

CIMARRON PEAK QUADRANGLE
ARIZONA-PIMA CO.
15 MINUTE SERIES (TOPOGRAPHIC)

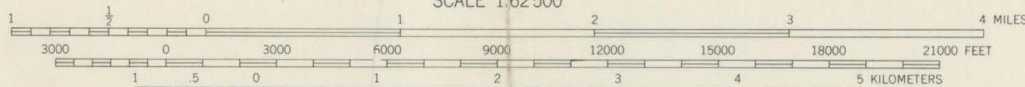
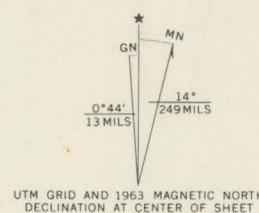


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Topography by photogrammetric methods from aerial
photographs taken 1961. Field checked 1963

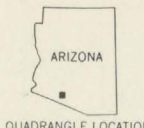
Polyconic projection. 1927 North American datum
10,000-foot grid based on Arizona coordinate system, central zone
1000-meter Universal Transverse Mercator grid ticks,
zone 12, shown in blue

Where omitted, land lines have not been established



CONTOUR INTERVAL 40 FEET
DOTTED LINES REPRESENT 20-FOOT CONTOURS
DATUM IS MEAN SEA LEVEL

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ROAD CLASSIFICATION
Light-duty ————— Unimproved dirt —————

FIELD COPY

CIMARRON PEAK, ARIZ.
N315-W11215/15

1963

AMS 3548 IV-SERIES V798

SIKORICUANO
MTS.

UNITED STATES
DEPARTMENT OF THE INTERIOR
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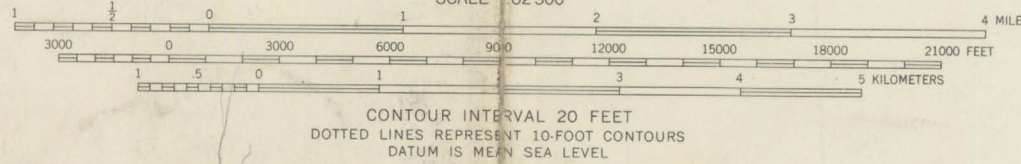
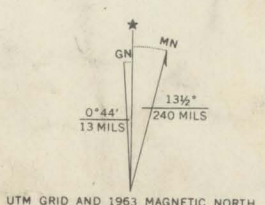
FIELD COPY.

PISINIMO QUADRANGLE
ARIZONA-PIMA CO.
15 MINUTE SERIES (TOPOGRAPHIC)

3548 IV
(CIMARRON PEAK)



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Control by USGS and USC&GS
Topography by photogrammetric methods from aerial
photographs taken 1961. Field checked 1963
Polyconic projection. 1927 North American datum
10,000-foot grid based on Arizona coordinate system, central zone
1000-meter Universal Transverse Mercator grid ticks,
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ROAD CLASSIFICATION
Medium-duty ——— Light-duty ———
Unimproved dirt ———
State Route ———

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
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FIELD COPY.

PISINIMO, ARIZ.
N3200-W11215/15

1963
AMS 3548 III-SERIES V798



THE PAPAGO TRIBE

PAPAGO TRIBAL COUNCIL

Sells, Arizona

**MINERAL PROSPECTING
PERMIT EXTENSION**

Date: June 3, 1966

Bear Creek Mining Company
1826 Kennecott Blvd. 10 East South Temple
Salt Lake City, Utah

Gentlemen:

On the 15th day of February, 1966, you were issued a Prospecting Permit on the Gila Bend, San Xavier and Papago Reservations for a period of four months.

This is to advise that you are hereby granted an extension of this permit under the terms and conditions contained therein, for an additional period of 4 month (s), provided however, that you will pay to the Papago Tribe a fee of \$500.00 per month for each additional month such extension may be required by you. *This extension is effective June 15, 1966.*

PAPAGO TRIBAL COUNCIL

Vernon B. Smith
Director of Mines - Papago Tribe

By: Robert C. Alabert
Tribal Chairman

APPROVED AS TO FORM:

Edward B. Berger
EDWARD B. BERGER, Tribal Attorney

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

Contract No.

Permit No. H54-5-66

Papago Agency

Sells, Arizona

MINERAL PROSPECTING PERMIT
(Nonexclusive and Nonoptional)

THIS AGREEMENT, made and entered into this fifteenth day of February, 1966, by and between the PAPAGO TRIBE, party of the first part, hereinafter called Permitter, whose address is Sells, Arizona, and BEAR CREEK MINING COMPANY, whose address is 1826 Kennecott Bldg., 10 East South Temple, Salt Lake City, Utah, party of the second part, hereinafter called Permittee.

In consideration of the sum of ----Ten and no/100---- dollars (\$ 10.00), paid to THE PAPAGO TRIBE, the receipt of which is hereby acknowledged, and the covenants, stipulations, and conditions hereinafter contained, it is agreed:

1. Permitter hereby grants the Permittee, subject to limitations hereinafter stated, a nonexclusive right for a term beginning with the date of approval of this permit and ending four months from the date hereof, for the sole purpose of prospecting for minerals other than oil and gas upon the following described lands of Permitter, subject to valid existing rights, consisting of 2,700,000 acres, more or less, to wit: within the boundaries of the Gila Bend, San Xavier and Papago Reservations, State of Arizona, excepting those areas that have been officially withdrawn from prospecting, patented mining claims, validated mining claims, and areas presently under lease, and allotted lands.

2. This permit is granted upon the following express terms, covenants, and conditions:

(a) PREFERENCE.—This permit does not grant an exclusive right to prospect or give any preference right to a lease.

(b) REMOVAL OF ORES.—No ores may be removed from the premises except samples for examination and experimental purposes and the removal of such samples shall be subject to the approval of the Superintendent.

(c) **DISPOSITION OF MINERALS AND SURFACE.**—The Permittee expressly reserves the right to use, lease, sell, or otherwise dispose of the minerals and the surface of the lands embraced within this permit under existing laws or laws hereafter enacted. Upon such disposition or use, the Permittee reserves the right to withdraw the lands from the permit area.

(d) **DAMAGES.**—The Permittee shall conduct all operations authorized in this permit with due regard to preventing unnecessary damages to vegetation, timber, soil, roads, bridges, cattle-guards, fences, and other improvements, including construction, operation, or maintenance of any of the facilities on or connected with this permit which causes damage to the watershed or pollution of the water resources. On termination of operations under this permit, the Permittee shall make provisions for the conservation, repair and protection of the property and leave all of the areas on which the Permittee has worked in a condition that will not be hazardous to life or limb, and will be to the satisfaction of the Superintendent.

(e) **LIABILITY FOR DAMAGE.**—The Permittee is liable for any and all damages resulting from its operations under this permit; including injury to the Permitter, the tenants, licensees and surface owners, and for any and all damage to, or destruction of, all property, caused by the Permittee's operations hereunder. The Permittee agrees to save and hold the Permitter and the United States, licensees, and the surface owner or their tenants harmless from all suits for injury or claims for damages to persons and property resulting from the Permittee's operations under this permit.

(f) **FOREST PROTECTION.**—The Permittee agrees:

(1) Not to cut, destroy, or damage timber without prior authority of the Commissioner of Indian Affairs, or his authorized representative, such authorization to be made only where required in the pursuance of necessary mining operations.

(2) To pay for all such timber cut, destroyed, or damaged at rates prescribed by the Commissioner of Indian Affairs or his authorized representative, such rates to be determined on the basis of sales of similar timber in the vicinity.

(3) Not to interfere with the sale or removal of timber from the land covered by this permit by contractors operating under an approved timber sales contract now in effect or which may be entered into during the period of this permit.

(4) To do all in its power to prevent and suppress forest, brush, or grass fires on the permitted land and in its vicinity, and to require its employees, contractors, subcontractors, and employees of contractors or subcontractors to do likewise. To place its employees, its contractors, subcontractors, and the employees of such contractors or subcontractors employed on the permitted land at the disposal of any authorized officer of the Indian Service for the purpose of suppressing forest, brush, or grass fires with the understanding that the payment for such services shall be made at rates to be determined by the Commissioner of Indian Affairs or his authorized representative, which rates shall not be less than the rates of pay prevailing in the vicinity for services of similar character: *Provided*, That no payment shall be made for services rendered in the suppression of fires for which the Permittee, its employees, contractors, or subcontractors or the employees of such contractors or subcontractors are responsible.

(5) To pay for the loss of all timber ten (10) inches or more in diameter occasioned by fires for which the permittee, or any of its employees, contractors or subcontractors, or the employees of such contractors or subcontractors are responsible for the start or spread, the assessment of the value of such damages to be determined by the Commissioner of Indian Affairs or his authorized representative on the basis of the value of such timber on sales of similar timber in the vicinity. Also to pay liquidated

damages of -Fifty----- dollars (\$50.00) per acre for all young timber less than ten (10) inches in diameter destroyed by such fires unless a lesser rate of damages shall be approved by the Commissioner of Indian Affairs, and to pay all costs for the suppression of fires for which it, or any of its employees, contractors, or subcontractors, or the employees of such contractors or subcontractors are responsible.

(f) Not to burn rubbish, grass, or other flammable materials except with the consent of the authorized representative of the Commissioner of Indian Affairs, and not to use explosives in such manner as to scatter flammable materials on the surface of the land during the fire season, except as authorized to do so by such representative.

(g) LIQUOR.—The Permittee agrees not to use or permit to be used any part of the premises for any unlawful purpose; that it will not use or permit to be used any part of the premises for the manufacture, sale, gift, transportation, drinking, or storage of intoxicating liquors or beverages in violation of existing laws relating thereto, and that any violation of this clause by the Permittee or with its knowledge, renders this permit voidable at the option of the Superintendent.

(h) ASSIGNMENT.—The Permittee agrees not to assign this permit or any interest therein by an operating agreement, an agreement to pay overriding royalty or otherwise, nor to sublet any portion of the permitted premises, except with the approval of the Secretary of the Interior or his authorized representative.

(i) SURRENDER AND TERMINATION.—The Permittee may, in writing, surrender this permit at any time upon the performance of all the Permittee's obligations hereunder, upon the payment of \$1 and upon a showing satisfactory to the Secretary of the Interior or his authorized representative, that full provision has been made for the conservation and protection of the property. If this permit has been recorded, Permittee shall file a recorded release with its application for surrender.

(j) REPORTS.—The Permittee shall within 30 days after the termination of this permit furnish the Superintendent detailed and complete written reports of the prospecting done and all information concerning the nature and value of the minerals.

(k) REGULATIONS.—This permit is granted pursuant to the act of
..... and regulation 25 CFR 171, and 30 CFR 231....., and must comply with all the laws and regulations applicable to prospecting on Indian lands.

(l) BOND.—Before this permit becomes effective, Permittee shall furnish to the Superintendent of the Papago Agency,
Sells, Arizona,.....
an acceptable surety bond in the amount of --Two Thousand and no/100- dollars (\$2,000.00.....).

(m) CANCELLATION AND FORFEITURE.—When in the opinion of the Secretary of the Interior or his authorized representative, there has been a violation of any of the terms and conditions of this permit, or the applicable regulations, the Secretary or his authorized representative may at any time after thirty days' notice to the Permittee, specifying the violations, declare this permit void.

(n) This permit is revocable at the discretion of the General Superintendent of the Papago Agency, Bureau of Indian Affairs, and the Chairman of the Tribal Council.

(o) This permit is in the nature of a general reconnaissance survey permit and while it includes geological, geophysical, geochemical, studies, sampling, etc., it does not include core drilling.

IN WITNESS WHEREOF, the said parties have hereunto subscribed their names and affixed their seals on the day and year first above mentioned.

Two witnesses to execution
by Permitter:

PAPAGO TRIBE

P.O.

P.O.

Two witnesses to execution
by Permittee:

BEAR CREEK MINING COMPANY

By:

Paul A. Bailly, President

Attest:

Douglas J. Lootens, Assistant Secretary

P.O.

P.O.

The within permit is

approved.

February 14

19 66

Superintendent,

Papago

Agency

Date:

Jan 6-1966

Recommended by:

Consultant Mining Engineer
to the Papago Tribal Council

APPROVED AS TO FORM:

EDWARD B. BERGER, Tribal Attorney

U.S. GOVERNMENT PRINTING OFFICE 16-74293-1

Chairman, Papago Tribal
Council



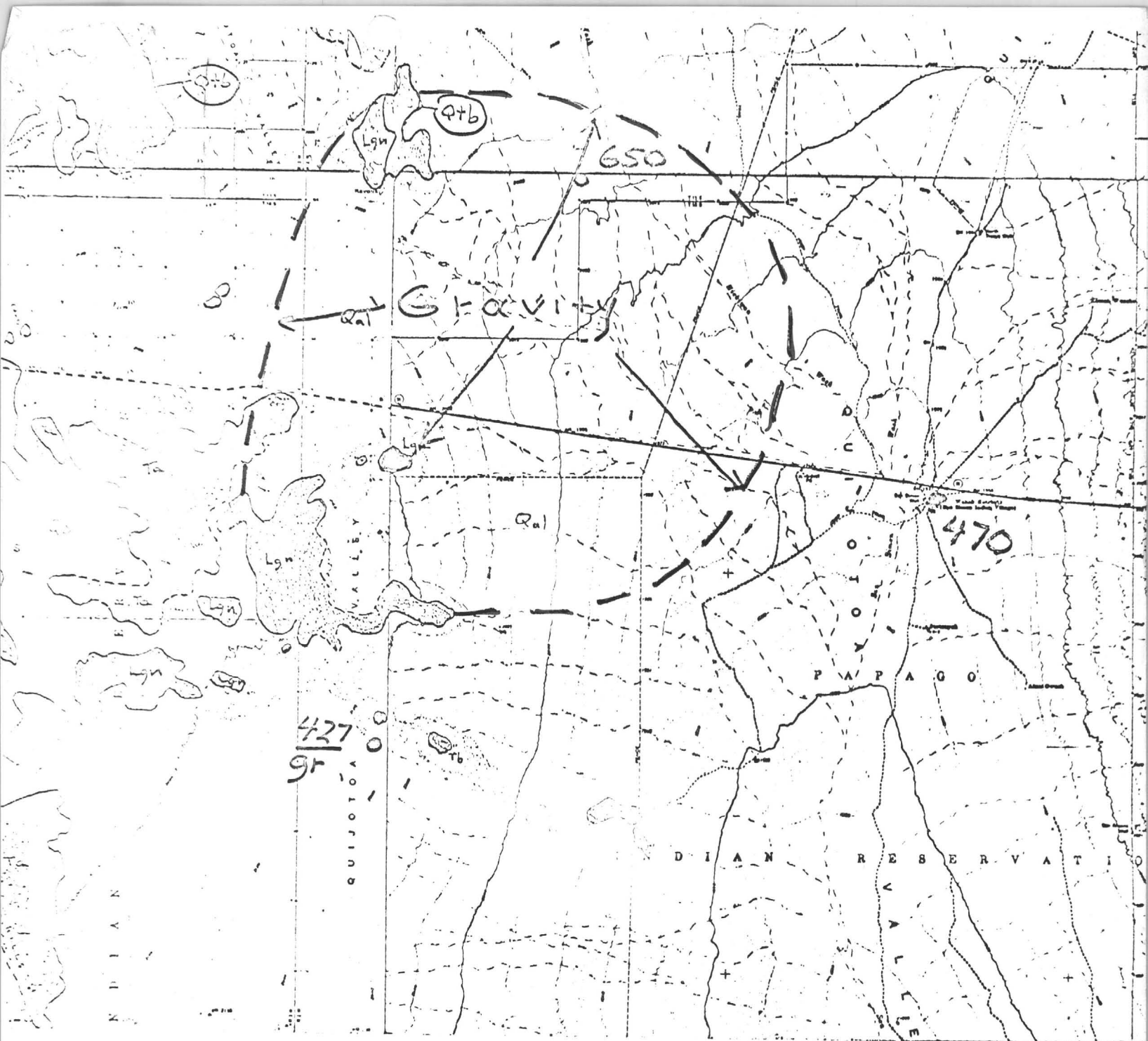
post mineral {
 Qal - alluvium
 Q+b - basalt
 Ta - andesite

pre mineral - Lgn - granite gneiss

● 650 well - all in gravel

● $\frac{427}{gr}$ well - granite at 427'

GUNSIGHT EAST
 PEDIMENT
 (06120648)



post mineral {
 Qal - alluvium
 Q+b - basalt
 Ta - andesite

pre mineral - Lgn - granite gneiss

○ 650 well - all in gravel

○ $\frac{427}{9r}$ well - granite at 427'

GUNSIGHT EAST
 PEDIMENT
 (06 12 0648)

Between

14894 - 45 } sections
14984 89 }

1-2 cm + Density.
5 Cmts. East into Bedrock.

KENNECOTT COPPER CORPORATION -- EXPLORATION SERVICES -- GEOPHYSICS DIVISION

INTER-OFFICE MEMO

DATE: 6/2/66

TO: Phil Deventer FROM: Clayton Marchington

SUBJECT: Cunsight East area aug.

Phil

I just received a request for the above area. You will need the following info.

I USGS Topo

mt ajo 15'

Sikot Chuago mts 15'

- Rinovino 15' - Papago Indian Reservation Solder

Cimarron ~~to~~ Peak 15' " " " "

II USGS 3rd order level control

Papago Solder - 56 Rinovino 76 ^{Quijeton #2} (Cimarron Peak) - Papago Solder

57 mt. ajo 77 Sikot Chuago mts.

III USGS level control

15 2nd order

321122 1st order - Vohal Valley Solder

92 " "

321123 " " "

most of this material you already have in your other Cunsight folders. The remainder can be found as noted. Pick up density samples also.

Best regards

Clayton

KCC - GP

9 - 65

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JANUARY 1963

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COAST AND GEODETIC SURVEY
WASHINGTON D. C.

VERTICAL CONTROL DATA

by the
Coast and Geodetic Survey
SEA LEVEL DATUM OF 1929

PAGE NO. 1

QUAD 321123
ARIZ.
LATITUDE 32°00' to 32°30'
LONGITUDE 112°30' to 113°00'
DIAGRAM NT 12-10 AJO

LINE 101
(First-order)

The original field work (I-945) from the north border of the quadrangle to 11 miles southeast of Ajo was done second-order in 1933 by a party supervised by G.R. Fish. Second-order leveling (I-14473) was also done from about 20 miles southeast of Ajo to the end of the quadrangle in March 1952 by a party supervised by J.H. Plagemier. Both lines were completely relevelled and united by first-order leveling (I-15059) in November and December 1953 by a party supervised by F.W. Richards.

These elevations are based on a supplementary adjustment of 1958.

Bench Mark Adjusted Elevation
(Meters) (Feet)

1326.61 (AHD)
404.067 1325.676
408.835 1341.319
415.914 1364.545
421.117 1381.615
428.690 1406.460

SPUR LINE TO AJO AIRPORT

X 332 436.567 1432.304
Y 332 437.938 1436.802

END OF THE SPUR LINE

N 36 433.002 1420.607
Z 332 437.391 1435.007
R 13 (USGS) 448.553 1471.628
A 333 462.450 1517.221
P 36 475.272 1559.288
B 333 493.728 1619.839
R 14 (USGS) 499.899 1640.085
C 333 521.958 1712.457
R 36 533.858 1751.499
R 15 (USGS) 533.508 1750.351

LINE 101
(Continued)

Bench Mark Adjusted Elevation
(Meters) (Feet)

6+41 (AHD) 532.441 1746.850
61+48 (AHD) 522.469 1714.134
81+40 (AHD) 521.223 1710.046
96+06 (AHD) 518.204 1700.141
F 307 519.546 1704.544
1714.03 (AHD) 522.388 1713.868
173475 (AHD) 516.206 1693.586
191475 (AHD) 511.642 1678.612
D 333 501.580 1645.600
R 28 (USGS) 495.736 1626.427
E 333 503.271 1651.148
T 36 509.970 1673.127
DUST RM 2 519.487 1704.350
DUST RM 1 519.492 1704.367
DUST 519.612 1704.760

R 27 (USGS) 531.052 1742.293
F 333 537.086 1764.747
U 36 538.497 1766.715
G 333 543.844 1784.262
R 26 (USGS) 548.646 1800.016
H 333 543.338 1782.601
J 333 548.371 1799.114
R 25 (USGS) 541.325 1775.997
K 333 531.281 1743.044
L 333 533.809 1751.338

M 333 542.212 1778.907
W 333 544.091 1785.072
1788.57 (USDA) 544.682 1787.011
R 24 (USGS) 549.567 1803.038
1807.20 (USDA) 550.369 1805.669
1805.58 (USDA) 549.877 1804.055
N 33 551.766 1810.252
S 27 S 26 (GLO) 552.789 1813.609
1821.38 (USDA) 554.862 1820.410
1825.28 (USDA) 555.884 1822.763
P 333 555.510 1822.608
Q 333 552.110 1811.381
R 23 (USGS) 552.670 1813.218
1813.86 (USDA) 552.391 1812.303

LINE 101
(Continued)

Bench Mark Adjusted Elevation
(Meters) (Feet)

V 309 555.629 1822.926
T 110 570.828 1872.792
1921.19 (USDA) 585.092 1919.589
1924.27 (USDA) 586.033 1922.677
1936.48 (USDA) 589.754 1934.885
1937.80 (USDA) 590.156 1936.203
W 309 598.643 1964.048
U 110 605.570 1986.774
X 309 589.708 1934.734
V 110 565.392 1854.957
Y 309 566.586 1858.874
W 110 565.772 1856.204
Z 309 564.360 1851.571
X 110 562.216 1844.537

LINE 102
(Second-order)

The field work (I-14473) was done in February and March 1952 by a party supervised by J.R. Plagemier. Some of the bench marks were set in 1935 by a party supervised by G.R. Fish. Check leveling (I-18615) was done in the vicinity of the Henry Gray Ranch in January 1962 by a party supervised by D. Moncevicz.

These elevations are based on a supplementary adjustment of 1958. Elevations for the check leveling are based on a supplementary adjustment of 1962.

Bench Mark

R 16 (USGS) No elev. available
G 307 541.075 1775.177
D 109 548.744 1800.338
H 307 563.295 1848.077
R 17 (USGS) 552.635 1813.103

LINE 102
(Continued)

Bench Mark Adjusted Elevation
(Meters) (Feet)

U 307 544.034 1775.042
1739.8 529.907 1738.537
K 307 527.172 1729.563
R 18 (USGS) 517.010 1696.224
R 18 RM (USGS) 517.131 1696.621
L 307 504.615 1655.558
M 307 495.295 1624.980
E 109 493.316 1618.488
N 307 481.406 1579.473
F 109 470.170 1542.549
P 307 461.110 1512.885
G 109 452.771 1485.466
Q 307 447.541 1468.307
H 109 453.104 1486.529
R 307 427.245 1401.720
K 110 418.848 1374.170
T 14 411.333 1349.515
J 109 415.522 1363.258
J 109 414.685 1360.512
D 312 405.878 1331.618
L 312 420.967 1381.123
L 109 399.389 1310.329
M 342 398.163 1306.306
N 342 378.470 1241.697
C 312 393.218 1290.083

LINE 103
(Second-order)

The field work (I-14473) was done in February and March 1952 by a party supervised by J.R. Plagemier. Some of the bench marks were set in 1935 by a party supervised by G.R. Fish.

These elevations are based on a supplementary adjustment of 1958.

Bench Mark

N 309 611.744 2007.030
U 309 626.048 2053.959
T 309 641.444 2104.471

VERTICAL CONTROL DATA

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

by the
Coast and Geodetic Survey
SEA-LEVEL DATUM OF 1929

QUAD 321123

ARIZ.
LATITUDE 32°00' to 32°30'
LONGITUDE 112°30' to 113°00'
DIAGRAM NI 12-10 AJO

LINE 103
(Continued)

Bench Mark	Adjusted Elevation (Meters)	(Feet)
M 110	No elev. available	
S 309	653.851	2145.176
N 110	684.907	2247.066
P 110	677.319	2222.371
R 309	648.906	2128.952
Q 110	637.787	2092.473
Q 309	637.104	2090.232
R 110	611.386	2005.856
P 309	589.762	1934.911
S 110	574.463	1884.717
K 309	560.710	1839.596
E 309	538.581	1766.994
F 309	524.929	1722.205
G 309	510.332	1674.314
R 22 (USGS)	499.948	1640.246
W 308	486.268	1595.364
X 308	485.699	1593.497
Y 308	474.817	1557.795
R 21 RM (USGS)	463.498	1520.660
R 21 (USGS)	455.910	1495.765
H 309	455.647	1494.902
H 110	443.991	1456.660
J 309	432.935	1420.388
J 110	426.086	1397.917
	419.443	1376.123

LINE 104
(Second-order)

The field work (L-14473) was done in February and March 1952 by a party supervised by J.R. Plagmiel. Some of the bench marks were set in 1935 by a party supervised by G.R. Fish.

These elevations are based on a supplementary adjustment of 1958.

Bench Mark	Adjusted Elevation (Meters)	(Feet)
G 110	456.143	1496.529
D 309	452.564	1484.787
F 110	457.861	1502.166
C 309	465.959	1528.734
E 110	474.275	1556.017

LINE 104
(Continued)

Bench Mark	Adjusted Elevation (Meters)	(Feet)
B 309	474.961	1558.268
D 110	484.158	1588.442
A 309	491.864	1613.724
C 110	498.730	1636.250
Z 308	481.647	1580.204
B 110	483.233	1585.407
V 308	467.648	1534.275
A 110	444.588	1458.619
U 308	444.179	1457.277
T 308	436.887	1433.353

LINE 105
(Second-order)

The field work (L-945) was done in November 1933 by a party supervised by G.R. Fish.

These elevations are based on a supplementary adjustment of 1958.

Bench Mark	Adjusted Elevation (Meters)	(Feet)
1837.7 (USGLO)	560.055	1837.447
V 36	573.712	1882.253
L 309	593.083	1945.806
W 36	600.870	1971.354
L 110	No elev. available	
M 309	605.693	1987.178
X 36	620.421	2035.498
Y 36	Destroyed	
Z 36	655.253	2149.776
A 37	663.128	2175.612
B 37	647.975	2125.898

LINE 106
(Second-order)

The field work (L-18612) was done in November 1961 by a party supervised by M.H. Schilly.

These elevations are based on a supplementary adjustment of 1962.

Bench Mark	Adjusted Elevation (Meters)	(Feet)
A 338	673.845	2210.773
B 338	677.220	2221.846
C 338	673.782	2210.566
D 338	686.148	2251.137
E 338	685.174	2247.942
F 338	679.528	2229.418
G 338	674.764	2213.788
H 338	671.670	2203.637
J 338	660.334	2166.446
K 338	667.408	2189.654
L 338	666.526	2186.761
M 338	667.645	2190.432
N 338	662.419	2173.286
P 338	659.772	2164.602

LINE 107
(Second-order)

The field work (L-18609) was done in November 1961 by a party supervised by M.H. Schilly.

These elevations are based on a supplementary adjustment of 1962.

Bench Mark	Adjusted Elevation (Meters)	(Feet)
A 336	512.316	1680.823
B 336	495.364	1625.207
C 336	481.844	1580.850
D 336	485.895	1594.140
E 336	495.660	1626.178

LINE 107
(Continued)

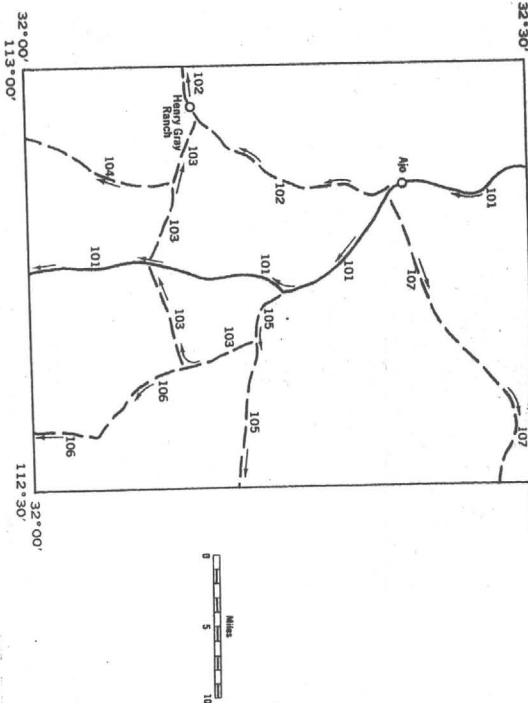
Bench Mark	Adjusted Elevation (Meters)	(Feet)
F 336	505.426	1658.218
G 336	518.126	1699.885
H 336	534.130	1752.391
J 336	547.746	1797.063
K 336	562.427	1845.229
T 11 S (USGLOS)	579.448	1901.072
L 336	605.798	1987.522
M 336	638.569	2095.038
N 336	670.548	2199.956
P 336	719.440	2360.363
Q 336	718.759	2358.128
R 336	765.169	2510.392
S 336	857.832	2814.404
T 336	795.252	2609.089
U 336	779.545	2557.557
V 336	775.562	2544.490
W 336	762.729	2502.387
X 336	735.699	2413.706
50 GMM (USGS)	725.261	2379.460
Y 336	724.966	2378.493
Z 336	718.065	2355.852

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

by the
Coast and Geodetic Survey
SEA-LEVEL DATUM OF 1929

QUAD 321123
LATITUDE 32°00' to 32°30'
LONGITUDE 112°30' to 113°00'
DIAGRAM NI 12-10 AJO

113°00' 112°30' 32°30' 32°00' 321123



DESCRIPTION OF BENCH MARK

Designation **1326.61 (AMD)** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **9.8 miles north**
Character of mark **Bronze disk**
Established by **Arizona Highway Department**
Detailed description **9.8 miles north along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, 0.2 mile north of milepole 34, 347 feet northwest of the center of a large wooden railroad bridge (No. 339), at a State Highway 85 concrete bridge over a large wash, in the top of the southeast concrete curb, 12.6 feet southeast of the center line of the highway, 16.0 feet northeast of the southwest end of the curb, and about 3 foot higher than the highway.**

LINE 101

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

RECOVERY NOTE, BENCH MARK

Designation **M 36** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **9.1 miles north**
Character of mark **Bronze disk**
Established by **U. S. Coast and Geodetic Survey**
Present condition **Good**
Detailed report **9.1 miles north along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, 13 poles south of milepole 34, 0.1 mile east of State Highway 85, 204.0 feet west of the junction of 2 washes, 18 feet west of the west edge of the wash leading southwest, 1.8 feet north of a witness post, about 1 1/2 feet lower than the track, and set in the top of a concrete post projecting 1.1 feet above the ground.**

R

DESCRIPTION OF BENCH MARK

Designation **V 332** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **8.2 miles north**
Character of mark **Brass disk**
Established by **U. S. Coast and Geodetic Survey**
Detailed description **8.2 miles north along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, 10 poles south of milepole 35, at the crossing of a gravelled road, 130 feet southeast of the center line of the road, 100.6 feet west of the west rail, 128 feet northwest of a telephone pole, 2.0 feet north of a witness post, 1 1/2 feet lower than the track, and set in the top of a concrete post projecting 0.3 foot above the ground.**

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

RECOVERY NOTE, BENCH MARK

Designation **R 12 (USGS)** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **7.6 miles north**
Character of mark **Bronze disk**
Established by **U. S. Geological Survey**
Present condition **Good**
Detailed report **7.6 miles north along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, 54 1/2 feet northeast of milepole 36, 0.1 mile northwest of wooden bridge 361, 41.2 feet southwest of the southwest rail, 1.4 feet north of a witness post, about level with the track, and set in the top of a concrete post projecting 0.4 foot above the ground.**

R

DESCRIPTION OF BENCH MARK

Designation **W 332** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **6.6 miles north**
Character of mark **Brass disk**
Established by **U. S. Coast and Geodetic Survey**
Detailed description **6.6 miles north along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, 349 feet southeast of the center of a cattle guard at the north entrance to Ajo Airport, at the crossing of a paved road, 98 feet southwest of the road, across the road from milepole 37, 69 1/2 feet southwest of the center line of the road, 56.0 feet west of the center of the southwest end of a 36-inch corrugated metal pipe culvert, 3.5 feet north of a witness post, about 1 1/2 feet lower than the road, and set in the top of a concrete post projecting 0.3 foot above the ground.**

SPUR LINE TO AJO AIRPORT

DESCRIPTION OF BENCH MARK

Designation **X 332** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **7.2 miles north**
Character of mark **Brass disk**
Established by **U. S. Coast and Geodetic Survey**
Detailed description **6.6 miles north along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 0.6 mile southwest cross-country through Ajo Airport, at the control tower, 54.5 feet north of the northeast corner of the concrete base of the tower steps, 2.5 feet south of the southeast leg of the tower, about level with the concrete apron, and set in the top of a concrete post projecting 0.3 foot above the ground.**

JANUARY 1963

VERTICAL CONTROL DATA

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

by the
Coast and Geodetic Survey
SEA-LEVEL DATUM OF 1929

QUAD 321123
ARIZ.
LATITUDE 32°00' to 32°30'
LONGITUDE 112°30' to 113°00'
DIAGRAM NI 12-10 AJO

PAGE NO. 2

DESCRIPTION OF BENCH MARK

Designation Y 332
Nearest town Ajo
Distance and direction from nearest town 7.3 miles north
Character of mark Brass disk
Established by U. S. Coast and Geodetic Survey
Detailed description 6.1 miles north along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 0.7 mile southwest cross-country through Ajo Airport, 0.15 mile southeast of the control tower, at the south (Ed Mills) hangar, 80.5 feet northeast of the northeast edge of the concrete apron, 4.8 feet southwest of the west corner of the hangar, about level with the apron, and set in the top of a concrete post projecting 0.1 foot above the ground.

Stamping Y 332 1953

DESCRIPTION OF BENCH MARK

Designation A 333
Nearest town Ajo
Distance and direction from nearest town 3.8 miles north
Character of mark Brass disk
Established by U. S. Coast and Geodetic Survey
Detailed description 3.8 miles north along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, 0.2 mile (5 poles) north of milepole 40, 57.6 feet east of the east rail, 28.2 feet east of the center line of a dirt road, 22 feet west of the most easterly one of two 20-inch water pipe lines, 6 feet south of power line pole 75, in line with a row of poles, 2.0 feet north of a witness post, about 1 foot lower than the track, and set in the top of a concrete post projecting 0.4 foot above the ground.

Stamping A 333 1953

END OF THE SPUR

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 685-A

RECOVERY NOTE, BENCH MARK

Designation N 36
Nearest town Ajo
Distance and direction from nearest town 6.1 miles north
Character of mark Bronze disk
Established by U. S. Coast and Geodetic Survey
Present condition Good
Detailed report 6.1 miles north along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, 0.3 mile northwest of the water tank at Childs, in the fork of a 'Y' formed by 2 small washes, 97.3 feet southwest of the southwest rail, 70 feet northwest of a telephone pole, 3.4 feet east of the center of the north-south wash, 2.4 feet southwest of the center line of the northwest-southeast wash, 2.2 feet north of a witness post, about 2 feet lower than the track, and set in the top of a concrete post projecting 0.9 foot above the ground.

Stamping N 36 1933 1420.785

R

RECOVERY NOTE, BENCH MARK

Designation P 36
Nearest town Ajo
Distance and direction from nearest town 3.1 miles north
Character of mark Bronze disk
Established by U. S. Coast and Geodetic Survey
Present condition Good
Detailed report 3.1 miles north along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, 1.3 poles south of milepole 40, 58.2 feet south of power line pole 63, 58.0 feet east of the east rail, 35 feet east of the center line of a dirt road, 22 feet west of the center line of the most easterly one of two 20-inch water pipe lines, 2.0 feet west of a witness post, about 1 foot lower than the track, and set in the top of a concrete post projecting 0.9 foot above the ground.

Stamping P 36 1933 1559.475

R

DESCRIPTION OF BENCH MARK

Designation Z 332
Nearest town Ajo
Distance and direction from nearest town 5.5 miles north
Character of mark Brass disk
Established by U. S. Coast and Geodetic Survey
Detailed description 5.5 miles north along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, 0.3 mile southeast of the water tank at Childs, 0.1 mile southeast of milepole 38, at the crossing of a paved road leading to the Ajo Airport, east of milepole 38, at the crossing of the road, 7.4 feet west of the west rail, 9.3 feet northeast of the center line of the road, 7.4 feet west of the west rail, 4.8 feet south of a telephone pole, 2.4 feet north of a witness post, about 3 feet lower than the road, and set in the top of a concrete post projecting 0.3 foot above the ground.

Stamping Z 332 1953

DESCRIPTION OF BENCH MARK

Designation B 333
Nearest town Ajo
Distance and direction from nearest town 2.1 miles north
Character of mark Brass disk
Established by U. S. Coast and Geodetic Survey
Detailed description 2.1 miles north along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, 0.5 mile south of milepole 41, 63.1 feet east of the east rail, 25.3 feet east of the center line of a dirt road, 9.5 feet west of the center of the line with a row of poles, 2.3 feet north of a witness post, about 1 foot lower than the track, and set in the top of a concrete post projecting 0.3 foot above the ground.

Stamping B 333 1953

County Pima

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 685-A

RECOVERY NOTE, BENCH MARK

Designation R 13 (USGS)
Nearest town Ajo
Distance and direction from nearest town 4.7 miles north
Character of mark Bronze disk
Established by U. S. Geological Survey
Present condition Good
Detailed report 4.7 miles north along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, 0.1 mile north of and across the track from milepole 39, 159 feet southeast of and across the track from a 4-foot-diameter metal tank, 58.0 feet east of the east rail, 137.2 feet southeast of a "STATION 1 MILE" sign, 26 feet east of the center line of a dirt road, 9.3 feet south of power line pole 91, in line with a row of poles, 1.2 feet north of a witness post, about 1.5 feet lower than the track, and set in the top of a concrete post projecting 0.2 foot above the ground.

Stamping R 13 1930

R

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 685-A

RECOVERY NOTE, BENCH MARK

Designation R 14 (USGS)
Nearest town Ajo
Distance and direction from nearest town 1.8 miles north
Character of mark Bronze disk
Established by U. S. Geological Survey
Present condition Good
Detailed report 1.8 miles north along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, at a point where two 20-inch water pipe lines cross a small wash, in the top of the west side of the north concrete pier of the westerly pipe line, 178.0 feet east of the east rail, 3.3 feet east of the center line of a dirt road, 4.3 feet south of power line pole 39, 0.6 foot west of the west edge of the pipe, near the white painted numbers "1641.1", and about 5 feet lower than the track.

Stamping R 14 1930

County Pima

R

JANUARY 1963

VERTICAL CONTROL DATA

PAGE NO. 3

PUBLISHED AND PRINTED BY:
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COAST AND GEODETIC SURVEY
WASHINGTON D.C.

by the
Coast and Geodetic Survey
SEA LEVEL DATUM OF 1929

QUAD 321123
ARIZ.
LATITUDE 32°00' to 32°30'
LONGITUDE 112°30' to 113°00'
DIAGRAM NI 12-10 AJO
Line 101

DESCRIPTION OF BENCH MARK

Designation C 353
Nearest town Ajo
State Arizona
County Pima
Distance and direction from nearest town 0.8 mile northwest
Character of mark Brass disk
Established by U. S. Coast and Geodetic Survey
Detailed description 0.8 mile northwest along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, near the northeast edge of Ajo, 202 feet north of the northeast corner of a wooden bridge, 49.3 feet northeast of the northeast rail, 40 feet north-west of the center of a small wash, 2.8 feet south of a witness post, about 4 feet lower than the track, and set in the top of a concrete post projecting 0.4 foot above the ground.

Stamping C 353 1953

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
FORM 685A

RECOVERY NOTE, BENCH MARK

Designation R 36
Nearest town Ajo
State Arizona
County Pima
Distance and direction from nearest town At Ajo
Character of mark Bronze disk
Established by U. S. Coast and Geodetic Survey
Present condition Good
Detailed report Recovered as described on 11tho 11st 76 dated 13 November 1952.

Nov. 1953
Stamping R 36 1953 1751.670

ORIGINAL DESCRIPTION

At Ajo, Pima County, at the Tucson, Cornelia & Gila Bend Railroad station, between the two waiting room doors in the east face of the station, 12 inches north of the south door, and about 7 inches above the ground. A standard disk, stamped "1751.670 R 36 1953" and set vertically.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
FORM 685A

RECOVERY NOTE, BENCH MARK

Designation R 15 (USGS)
Nearest town Ajo
State Arizona
County Pima
Distance and direction from nearest town 0.25 mile southeast
Character of mark Bronze disk
Established by U. S. Geological Survey
Present condition Good
Detailed report 0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 0.1 mile southeast along State Highway 86, in the top of the northeast end of the northeast concrete head wall of a large concrete culvert for a gravelled road and a railroad track leading to a large copper mill, 139 feet south of the center line of the highway (measured from a point over the center of a culvert), 71 feet northwest of the center of a gate in a fence around the copper mill and the center of the railroad track, 31.6 feet northeast of the northeast rail of the track (measured from a point opposite a switch), 0.8 foot southeast of the northeast end of the head wall, and about 3 feet lower than the highway.

Nov. 1953
Stamping R 15 1950

Note: The direction along State Highway 86 on 11tho 11st 76 dated Nov. 15, 1952 is in error.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
FORM 685A

RECOVERY NOTE, BENCH MARK

Designation 6 + 41 (ABD)
Nearest town Ajo
State Arizona
County Pima
Distance and direction from nearest town 0.25 mile southeast
Character of mark Bronze disk
Established by Arizona State Highway Department
Present condition Good
Detailed report 0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 0.1 mile southeast along State Highway 86, at a large concrete culvert, in the top of the center of the south concrete head wall, 31.6 feet south of the center line of the highway, 5.9 feet west of the east end of the head wall, and about 6 feet lower than the road.
The stamping and the direction along State Highway 86 as shown on 11tho 11st dated Nov. 13, 1952 are in error.

Nov. 1953
Stamping 746.96 1950 6+41

FORM 685A
(11-6-53)

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

RECOVERY NOTE, BENCH MARK

Designation 61+48 (ABD)
Nearest town Ajo
State Arizona
County Pima
Distance and direction from nearest town 1.1 miles southeast
Character of mark An Arizona Highway Department Disk
Established by Arizona State Highway Department
Present condition Good
Detailed report About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 0.05 mile southeast along State Highway 85 in the center of the top of the southwest concrete headwall of a triple-channel metal culvert, 29 feet southwest of the center line of the highway, and about 18 feet below the level of the highway.

County Pima
Chief of Party D. Moncevicz
Recovery Date November 1961
Stamping 1714.24 61+48 1938

FORM 685A
(11-6-53)

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

RECOVERY NOTE, BENCH MARK

Designation 81+40 (ABD)
Nearest town Ajo
State Arizona
County Pima
Distance and direction from nearest town 1.5 miles southeast
Character of mark An Arizona Highway Department Disk
Established by Arizona State Highway Department
Present condition Good
Detailed report About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 1.35 miles southeast along State Highway 85 in the center of the top of the southwest concrete head wall of a concrete culvert, 26 feet southwest of the center line of the highway, and about 4 feet below the level of the highway.

County Pima
Chief of Party D. Moncevicz
Recovery Date November 1961
Stamping 1710.19 81+40 1938

FORM 685A
(11-6-53)

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

RECOVERY NOTE, BENCH MARK

Designation 96+06 (ABD)
Nearest town Ajo
State Arizona
County Pima
Distance and direction from nearest town 1.8 miles southeast
Character of mark An Arizona Highway Department Disk
Established by Arizona State Highway Department
Present condition Good
Detailed report About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 1.65 mile southeast along State Highway 85 in the center of the top of the southwest concrete headwall of a concrete culvert, 168 feet southwest of the center line of the highway, and about 6 inches above the level of the highway.

County Pima
Chief of Party D. Moncevicz
Recovery Date November 1961
Stamping 1700.26 96+06 1938

VERTICAL CONTROL DATA

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

by the
Coast and Geodetic Survey
SEA-LEVEL DATUM OF 1929

QUAD 321123
ARIZ.

LATITUDE 32°00' to 32°30'
LONGITUDE 112°30' to 113°00'
DIAGRAM NI 12-10 AJO

R

RECOVERY NOTE, BENCH MARK

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 654-A

Designation **F 307** State **Arizona** County **Pima**
Nearest town **Ajo** County **Pima** Nov. 1953
Distance and direction from nearest town **2.05 miles southeast**
Character of mark **Brass disk**
Established by **U. S. Coast and Geodetic Survey**
Present condition **Good**

Detailed report **Good**
0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 1.9 miles southeast along State Highway 86, at the "T" junction of a road leading southwest to Darby Well, 124 feet south of a large corrugated metal pipe culvert, 107 feet west of the center of the junction, 85 feet southwest of the center line of the highway, 93 feet northwest of the center line of the road, 2.2 feet north of a witness post, about 1 foot higher than the highway, and set in the top of a concrete post projecting 0.4 foot above the ground.

DESCRIPTION OF BENCH MARK

Designation **D 333** State **Arizona** County **Pima**
Nearest town **Ajo** County **Pima** Stamping **D 333 1953**
Distance and direction from nearest town **4.65 miles southeast**
Character of mark **Brass disk**
Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 4.5 miles southeast along State Highway 86, 174 feet south of the center of a dip in the highway, at the "T" junction of a track road leading southwest, 88 feet southwest of the center line of the highway, 86 feet northwest of the center line of the road, 2.3 feet north of a witness post, about level with the highway, and set in the top of a concrete post projecting 0.4 foot above the ground.**

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 654-A

RECOVERY NOTE, BENCH MARK

DESCRIPTION OF BENCH MARK

Designation **1714.03 (AED)** State **Arizona** County **Pima**
Nearest town **Ajo** County **Pima** Stamping **1714.03 140.22.92**
Distance and direction from nearest town **2.65 miles southeast**
Character of mark **Bronze disk**
Established by **Arizona Highway Department**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 2.5 miles southeast along State Highway 86, 0.6 mile southeast of the "T" junction of a paved road leading southwest to Darby Well, at a large concrete bridge over a wash, in the top of the approximate center of the southwest concrete head wall, 32.9 feet southeast of the northwest end of the concrete head wall, 14.3 feet southwest of the center line of the highway, and about 1 foot higher than the highway.**

DESCRIPTION OF BENCH MARK

Designation **173+75 (AED)** State **Arizona** County **Pima**
Nearest town **Ajo** County **Pima** Stamping **1693.69 173+75 1939**
Distance and direction from nearest town **3.3 miles southeast**
Character of mark **Bronze disk**
Established by **Arizona Highway Department**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 3.15 miles southeast along State Highway 86, at an 8-by 50 foot concrete box culvert, in the top of the approximate center of the southwest concrete head wall, 14.0 feet southwest of the center line of the highway, 4.7 feet southeast of the northwest end of the head wall, and about level with the highway.**

DESCRIPTION OF BENCH MARK

Designation **191+75 (AED)** State **Arizona** County **Pima**
Nearest town **Ajo** County **Pima** Stamping **1678.80 191+75 1939**
Distance and direction from nearest town **3.65 miles southeast**
Character of mark **Bronze disk**
Established by **Arizona Highway Department**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 3.5 miles southeast along State Highway 86, at the "T" junction of a track road leading south, at a double concrete box culvert, in the top of the center of the southwest concrete head wall, 78 feet northwest of the center of the junction, 14.8 feet southwest of the center line of the highway, 7.0 feet southeast of the northwest end of the head wall, and about level with the highway.**

DESCRIPTION OF BENCH MARK

Designation **E 333** State **Arizona** County **Pima**
Nearest town **Ajo** County **Pima** Stamping **E 333 1953**
Distance and direction from nearest town **6.65 miles southeast**
Character of mark **Brass disk**
Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 6.5 miles southeast along State Highway 86, at the southeast end of a curve, at the "T" junction of a dim track road leading southwest, 53.7 feet southwest of the center line of the highway, 48 feet southeast of the center line of the road, 2.5 feet north of a witness post, about 2 foot lower than the highway, and set in the top of a concrete post projecting 0.4 foot above the ground.**

RECOVERY NOTE, BENCH MARK

Designation **T 35** State **Arizona** County **Pima**
Nearest town **Ajo** County **Pima** Nov. 1953
Distance and direction from nearest town **7.25 miles southeast**
Character of mark **Bronze disk**
Established by **U. S. Coast and Geodetic Survey**
Present condition **Good**
Detailed report **Good**
0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 7.1 miles southeast along State Highway 86, 0.6 mile southeast of the southeast end of a curve in the highway, 128.6 feet southwest of the center of the junction, 107 feet west of the center line of the highway, 43 feet southwest of the center line of the highway, 1.7 feet north of a witness post, about 2 foot lower than the highway, and set in the top of a concrete post projecting 0.9 foot above the ground.

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

by the
Coast and Geodetic Survey
SEA-LEVEL DATUM OF 1929

QUAD 321123
ARIZ.
LATITUDE 32°00' to 32°30'
LONGITUDE 112°30' to 113°00'
DIAGRAM NT 12-10 AJO

Line 101

DESCRIPTION OF BENCH MARK

Designation **DIST R.M. 2** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **8.05 miles southeast**
Character of mark **Bronze reference-mark disk**
Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 7.9 miles southeast along State Highway 86, 1.4 miles southeast of the southeast end of a bend in the highway, 63.7 feet north of DIST R.M. 1, 52 feet southwest of the center line of the highway, 50.9 feet northwest of triangulation station DIST 2.2 feet northeast of a witness post, about 1 foot lower than the highway, and set in the top of a concrete post projecting 0.5 foot above the ground.**

DESCRIPTION OF BENCH MARK

Designation **DIST R.M. 1** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **8.05 miles southeast**
Character of mark **Bronze reference-mark disk**
Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 7.9 miles southeast along State Highway 86, 1.4 miles southeast of the southeast end of a bend in the highway, 95.8 feet southwest of the center line of the highway, 63.7 feet south of DIST R.M. 2, 44.3 feet southwest of triangulation station DIST 1.8 feet north of a witness post, about 1 foot lower than the highway, and set in the top of a concrete post projecting 0.5 foot above the ground.**

DESCRIPTION OF BENCH MARK

Designation **DIST** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **8.05 miles southeast**
Character of mark **Bronze triangulation-station disk**
Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 7.9 miles southeast along State Highway 86, 1.4 miles southeast of the southeast end of a bend in the highway, 51.5 feet southwest of the center line of the highway, 50.9 feet southeast of DIST R.M. 2, 44.3 feet northeast of DIST R.M. 1, 1.8 feet north of a witness post, about 1 foot lower than the highway, and set in the top of a concrete post projecting 0.6 foot above the ground.**

RECOVERY NOTE, BENCH MARK

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 582-A

Designation **R 27 (USCS)** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **8.9 miles southeast**
Character of mark **Bronze disk**
Established by **U. S. Geological Survey**
Present condition **Good**
Detailed report **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 8.75 miles southeast along State Highway 86, 257 feet northeast of the center of a dip in the highway, 43.7 feet southwest of the center line of the highway, 1.4 feet north of a witness post, about 1 foot lower than the highway, and set in the top of a concrete post projecting 0.6 foot above the ground.**
Note: The disk is slanting; red held on letters "R" of the word "SURVEY".

R

DESCRIPTION OF BENCH MARK

Designation **F 333** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **9.6 miles southeast**
Character of mark **Bress disk**
Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 9.45 miles southeast along State Highway 86, 0.1 mile southeast of the southeast end of a bend in the highway, about 100 yards northwest of a dip in the highway, 44 feet southwest of the center line of the highway, 13 feet northeast of a lone bushy tree, 2.2 feet north of a witness post, about 1 foot above the highway, and set in the top of a concrete post projecting 0.3 foot above the ground.**

RECOVERY NOTE, BENCH MARK

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 582-A

Designation **U 36** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **10.3 miles southeast**
Character of mark **Bronze disk**
Established by **U. S. Coast and Geodetic Survey**
Present condition **Good**
Detailed report **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.15 miles southeast along State Highway 86, 157 feet northeast of the center of a dip in the highway, at the "Y" junction of a creek road leading west, 55.2 feet southwest of the center line of the highway, 70 feet southeast of the center line of the road at a point where the road turns west, 2.0 feet north of a witness post, about 1 foot lower than the highway, and set in the top of a concrete post projecting 1.2 feet above the ground.**

DESCRIPTION OF BENCH MARK

Designation **G 333** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **10.9 miles southeast**
Character of mark **Bress disk**
Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, at the "Y" junction of the Sonoyta-Ajo highway, at an 18-inch concrete pipe wall west under the Sonoyta-Ajo highway, in the top of the approximate center of the east concrete head wall, 43 feet southwest of the center line of State Highway 86, 19.7 feet east of the center line of the Sonoyta-Ajo highway, and about level with the Sonoyta-Ajo highway.**

RECOVERY NOTE, BENCH MARK

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 582-A

Designation **R 26 (USCS)** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **11.7 miles southeast**
Character of mark **Bronze disk**
Established by **U. S. Geological Survey**
Present condition **Good**
Detailed report **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 11.55 miles southeast along State Highway 86, at the "Y" junction of the old Sonoyta-Ajo highway, 176 feet southwest of the center line of State Highway 86, 28 feet southeast of the center line of the old highway, 4.3 feet southeast of a cast iron post (an old Customs sign marker post), 1.7 feet northeast of a witness post, about 1 foot lower than the highway, and set in the top of a concrete post projecting 0.5 foot above the ground.**

R

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COAST AND GEODETIC SURVEY
WASHINGTON D. C.

by the
Coast and Geodetic Survey
SEA LEVEL DATUM OF 1929

QUAD 321123

ARIZ.
LATITUDE 32°00' to 32°30'
LONGITUDE 112°30' to 113°00'
DIAGRAM NI 12-10 AJO

DESCRIPTION OF BENCH MARK

Designation **H 333** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **11.9 miles southeast**
Character of mark **Brass disk** Stamping **H 333 1953**

Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 1.0 mile south along the Sonoyta-Ajo highway, 52½ feet west of the center line of the highway, 2.4 feet south of a witness post, about 1½ feet lower than the highway, and set in the top of a concrete post projecting 0.4 foot above the ground.**

DESCRIPTION OF BENCH MARK

Designation **J 333** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **12.9 miles southeast**
Character of mark **Brass disk** Stamping **J 333 1953**

Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 2.0 miles south along the Ajo-Sonoyta highway, at a large concrete bridge, in the top of the north end of the east concrete curb, 13.4 feet east of the center line of the highway, 4.0 feet south of the north end of the bridge floor, and about ½ foot higher than the highway.**

DESCRIPTION OF BENCH MARK

Designation **R 25 (USGS)** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **13.7 miles southeast**
Character of mark **Bronze disk** Stamping **R 25 1930**

Established by **U. S. Geological Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 2.8 miles south along the Sonoyta-Ajo highway, 0.8 mile south of a large concrete bridge, 0.2 mile north of the southwest end of a ridge at the edge of the highway and covered with black rock, 23.5 feet west of the center line of the highway, 1.6 feet north of a witness post, about level with the highway, and set in the top of a concrete post projecting 0.5 foot above the ground.**

DESCRIPTION OF BENCH MARK

Designation **K 333** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **14.5 miles southeast**
Character of mark **Brass disk** Stamping **K 333 1953**

Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 3.6 miles south along the Sonoyta-Ajo highway, at a twin concrete box culvert, in the top of the approximate center of the east concrete head wall, 15.4 feet east of the center line of the highway, 8.4 feet south of the north end of the head wall, and about 1 foot higher than the highway.**

DESCRIPTION OF BENCH MARK

Designation **I 333** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **15.0 miles southeast**
Character of mark **Brass disk** Stamping **I 333 1953**

Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 4.1 miles south along the Sonoyta-Ajo highway, at a 36-inch concrete pipe culvert, in the top of the north end of the west concrete head wall, 20.7 feet west of the center line of the highway, 1.8 feet south of the north end of the head wall, and about level with the highway.**

DESCRIPTION OF BENCH MARK

Designation **M 333** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **15.7 miles southeast**
Character of mark **Brass disk** Stamping **M 333 1953**

Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 4.8 miles south along the Sonoyta-Ajo highway, at an entrance to the Organ Pipe Cactus National Monument, 56.4 feet west of the center line of the highway, 50.0 feet northwest of the northwest corner of a cattle guard, 35.4 feet northwest of the northwest post of the National Monument sign, 2.5 feet northeast of a fence, 2.2 feet east of a witness post, about ½ foot higher than the highway, and set in the top of a concrete post projecting 0.5 foot above the ground.**

DESCRIPTION OF BENCH MARK

Designation **1786.63 (USDA)** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **16.15 miles southeast**
Character of mark **Bronze disk** Stamping **1786.63 1179+00.00**

Established by **U. S. Department of Agriculture**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 5.25 miles south along the Sonoyta-Ajo highway, 0.3 mile south of an entrance to the Organ Pipe Cactus National Monument, 175 feet northwest of the center of a dip in the highway, 100 feet west of the center line of the highway, 9 feet northeast of the center line of a dim track road, 2.8 feet north of a witness post, about level with the highway, and set in the top of a concrete post projecting 0.3 foot above the ground.**

DESCRIPTION OF BENCH MARK

Designation **1788.57 (USDA)** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **16.15 miles southeast**
Character of mark **Bronze disk** Stamping **1788.57 1 1179+00.00**

Established by **U. S. Department of Agriculture**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 5.25 miles south along the Sonoyta-Ajo highway, 0.3 mile south of an entrance to the Organ Pipe Cactus National Monument, 175 feet northeast of the center of a dip in the highway, 200 feet east of the center line of the highway, 2.8 feet north of a witness post, about level with the highway, and set in the top of a concrete post projecting 0.4 foot above the ground.**

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

by the
Coast and Geodetic Survey
SEA LEVEL DATUM OF 1929

QUAD 321123
ARIZ. LATITUDE 32°00' to 32°30'
LONGITUDE 112°30' to 113°00'
DIAGRAM NI 12-10 AJO

Line 101

DESCRIPTION OF BENCH MARK

Designation **R 24 (USGS)** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **16.75 miles southeast** Stamping **R 24 1930**
Character of mark **Bronze disk**
Established by **U. S. Geological Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 5.85 miles south along the Sonoyta-Ajo highway, 0.9 mile south of an entrance to the Organ Pipe Cactus National Monument, at the "Y" junction of a dirt track road leading west, 36.8 feet west of the center line of the highway, 36 feet south of the center line of the road, 1.8 feet north of a witness post, about 1 1/2 feet higher than the highway, and set in the top of a concrete post projecting 0.5 foot above the ground.**

DESCRIPTION OF BENCH MARK

Designation **1807.20 (USDA)** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **16.95 miles southeast** Stamping **1807.20 1A 1139+00.00**
Character of mark **Bronze disk**
Established by **U. S. Department of Agriculture**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 6.05 miles south along the Sonoyta-Ajo highway, on top of a low rise, 50 feet west of the center line of the highway, 2.2 feet north of a witness post, about 28 feet higher than the highway, and set in the top of a concrete post projecting 0.5 foot above the ground.**

DESCRIPTION OF BENCH MARK

Designation **1805.58 (USDA)** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **16.95 miles southeast** Stamping **1805.58 1A 1139+00.00**
Character of mark **Bronze disk**
Established by **U. S. Department of Agriculture**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 6.05 miles south along the Sonoyta-Ajo highway, 50 feet east of the center line of the highway, 2.0 feet north of a witness post, about level with the highway, and set in the top of a concrete post projecting 0.5 foot above the ground.**

DESCRIPTION OF BENCH MARK

Designation **N 333** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **17.25 miles southeast** Stamping **N 333 1953**
Character of mark **Brass disk**
Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 6.35 miles south along the Sonoyta-Ajo highway, at a double concrete box culvert, in the top of the approximate center of the west concrete head wall, 16.8 feet west of the center line of the highway, 9.6 feet south of the north end of the head wall, and about level with the highway.**

DESCRIPTION OF BENCH MARK

Designation **S27 S26 (GLD)** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **17.4 miles southeast** Stamping **1/4 S27 S26 1918**
Character of mark **Bronze cap**
Established by **U. S. General Land Office**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 6.5 miles south along the Sonoyta-Ajo highway, 0.1 mile south of a double concrete box culvert, 92 feet east of the center line of the highway, 1.6 feet north of a witness post, about level with the highway, and riveted on top of a 3/4-inch iron pipe projecting 0.9 foot above the ground.**

DESCRIPTION OF BENCH MARK

Designation **1821.38 (USDA)** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **17.9 miles southeast** Stamping **1821.38 1A 1092+00.00**
Character of mark **Bronze disk**
Established by **U. S. Department of Agriculture**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 7.0 miles south along the Sonoyta-Ajo highway, 101 feet west of the center line of the highway, 2.1 feet north of a witness post, about level with the highway, and set in the top of a concrete post projecting 0.5 foot above the ground.**

DESCRIPTION OF BENCH MARK

Designation **1825.25 (USDA)** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **17.9 miles southeast** Stamping **1825.25 1A 1092+00.00**
Character of mark **Bronze disk**
Established by **U. S. Department of Agriculture**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 7.0 miles south along the Sonoyta-Ajo highway, 0.1 mile north of a dip in the highway, 99.2 feet east of the center line of the highway, 2.4 feet north of a witness post, about level with the highway, and set in the top of a concrete post projecting 0.5 foot above the ground.**

DESCRIPTION OF BENCH MARK

Designation **P 333** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **18.35 miles southeast** Stamping **P 333 1953**
Character of mark **Brass disk**
Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 7.45 miles south along the Sonoyta-Ajo highway, 0.1 mile north of a dip in the highway, 38 feet west of the center line of the highway, 25.4 feet north of a Palo Verde tree, 5.1 feet south of a witness post, about 1 foot higher than the highway, and set in the top of a concrete post projecting 0.4 foot above the ground.**

VERTICAL CONTROL DATA

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

by the
Coast and Geodetic Survey
SEA-LEVEL DATUM OF 1929

DESCRIPTION OF BENCH MARK

Designation **Q 333** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **19.2 miles southeast**
Character of mark **Brass disk**
Established by **U. S. Coast and Geodetic Survey**
Detailed report **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 9.3 miles south along the Sonoyta-Ajo highway, at a double concrete box culvert, in the top of the west concrete head wall, 17.0 feet west of the center line of the highway, 1.6 feet south of the north end of the head wall, and about level with the highway.**

RECOVERY NOTE, BENCH MARK

Designation **R 23 (USGS)** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **19.9 miles southeast**
Character of mark **Brass disk**
Established by **U. S. Geological Survey**
Present condition **Good**
Detailed report **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 9.0 miles south along the Sonoyta-Ajo highway, at the intersection of a track road (east-west), 45 feet west of the center line of the highway, 233 feet north of the center line of the road, 1.9 feet south of a witness post, about 1 foot higher than the highway, and set in the top of a concrete post projecting 0.4 foot above the ground.**

RECOVERY NOTE, BENCH MARK

Designation **1813.86 (USDA)** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **20.55 miles southeast**
Character of mark **Brass disk**
Established by **U. S. Department of Agriculture**
Present condition **Good**
Detailed report **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 9.65 miles south along the Sonoyta-Ajo railroad, 0.1 mile south of a dip in the highway, 433 feet west of the center line of the highway, 1.8 feet north of a witness post, about 1 foot higher than the highway, and set in the top of a concrete post projecting 0.5 foot above the ground.**
Note: The stamping as shown on litho list 76 dated Nov. 13, 1952 is in error.

RECOVERY NOTE, BENCH MARK

Designation **V 309** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **20.9 miles southeast**
Character of mark **Brass disk**
Established by **U. S. Coast and Geodetic Survey**
Present condition **Good**
Detailed report **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 10.0 miles south along the Sonoyta-Ajo highway, 235 feet south of the center of the "T" junction of a gravelled road leading east, at a concrete box culvert, in the top of the approximate center of the east concrete head wall, 133 feet east of the center line of the highway, 3.8 feet north of the south end of the head wall, and about 3 foot lower than the highway.**

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 683-A

RECOVERY NOTE, BENCH MARK

Designation **T 110** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **21.9 miles southeast**
Character of mark **Brass disk**
Established by **U. S. Coast and Geodetic Survey**
Present condition **Good**
Detailed report **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 11.0 miles south along the Sonoyta-Ajo highway, 62.3 feet northeast of the north end of the east concrete head wall of a culvert, 42 feet east of the center line of the highway, 1.9 feet north of a witness post, about 2 feet higher than the highway, and set in the top of a concrete post projecting 0.6 foot above the ground.**

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 683-A

RECOVERY NOTE, BENCH MARK

Designation **1921.19 (USDA)** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **22.7 miles southeast**
Character of mark **Brass disk**
Established by **U. S. Department of Agriculture**
Present condition **Good**
Detailed report **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 11.8 miles south along the Sonoyta-Ajo highway, 483 feet west of the center line of the highway, 32.8 feet northwest of the north end of the west concrete head wall of a concrete culvert, 2.1 feet south of a witness post, about 1 foot lower than the highway, and set in the top of a concrete post projecting 0.2 foot above the ground.**
Note: The stamping as shown on litho list 76 dated Nov. 13, 1952 is in error.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 683-A

RECOVERY NOTE, BENCH MARK

Designation **1924.27 (USDA)** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **22.7 miles southeast**
Character of mark **Brass disk**
Established by **U. S. Department of Agriculture**
Present condition **Good**
Detailed report **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 11.8 miles south along the Sonoyta-Ajo highway, 51 feet east of the center line of the highway, 35.0 feet northeast of the southeast end of the east concrete head wall of a culvert, 1.0 foot north of a witness post, about level with the highway, and set in the top of a concrete post projecting 0.2 foot above the ground.**
Note: The stamping as shown on litho list 76 dated 11/3/53 is in error.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 683-A

RECOVERY NOTE, BENCH MARK

Designation **1936.48 (USDA)** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **23.1 miles southeast**
Character of mark **Brass disk**
Established by **U. S. Department of Agriculture**
Present condition **Good**
Detailed report **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 12.2 miles south along the Sonoyta-Ajo highway, at a cut through a low ridge and at a slight curve, 493 feet west of the center line of the highway, 1.5 feet south of a witness post, about 43 feet higher than the highway, and set in the top of a concrete post projecting 0.1 foot above the ground.**
Note: The stamping as shown on litho list 76 dated 11/13/53 is in error.

JANUARY 1963

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

VERTICAL CONTROL DATA

by the
Coast and Geodetic Survey
SEA-LEVEL DATUM OF 1929

PAGE NO. 9
QUAD 321123
ARIZ.
LATITUDE 32°00' to 32°30'
LONGITUDE 112°30' to 113°00'
DIAGRAM NI 12-10 AJO

Line 101

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 660-A

RECOVERY NOTE, BENCH MARK

Designation 1937.80 (USDA) State Arizona County Pima

Nearest town Ajo Distance and direction from nearest town 25.1 miles southeast

Character of mark Bronze disk Established by U. S. Department of Agriculture

Present condition Good

Detailed report 0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 12.2 miles south along the Sonoyta-Ajo highway, at a cut through a low ridge and at a slight curve, 100 feet east of the center line of the highway, 2.0 feet south of the center line of the road, 48 feet west of the center line of the road, 1.9 feet north of a witness post, about 48 feet higher than the highway, and set in the top of a concrete post projecting 0.1 foot above the ground.

Note: The stamping as shown on litho list 76 dated 11/15/53 is in error.

R

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 660-A

RECOVERY NOTE, BENCH MARK

Designation Y 110 State Arizona County Pima

Nearest town Lukeville Distance and direction from nearest town 13.7 miles north

Character of mark Bronze disk Established by U. S. Coast and Geodetic Survey

Present condition Good

Detailed report 5.1 miles north along the Sonoyta-Ajo highway from the post office at Lukeville, thence 0.1 mile east along a track road, thence 8.5 miles north along the old Sonoyta-Ajo road, 1008 feet southwest of the approximate center of the crossing of a wash, 438 feet west of the center line of the road, 1.9 feet north of a witness post, about level with the road, and set in the top of a concrete post projecting 0.2 foot above the ground.

R

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 660-A

RECOVERY NOTE, BENCH MARK

Designation W 309 State Arizona County Pima

Nearest town Lukeville Distance and direction from nearest town 16.1 miles north

Character of mark Brass disk Established by U. S. Coast and Geodetic Survey

Present condition Good

Detailed report 5.1 miles north along the Sonoyta-Ajo highway from the post office at Lukeville, thence 0.1 mile east along a track road, thence 10.55 miles north along the old Sonoyta-Ajo road, thence 0.35 mile west along a track road, 23.8 miles southeast of Ajo, at the "Y" junction of the Sonoyta-Ajo highway, 1338 feet south of the center of a wash, 838 feet north of the center line of the road, 818 feet east of the center line of the highway, 2.2 feet west of a witness post, about 8 feet higher than the highway, and set in the top of a concrete post projecting 0.4 foot above the ground.

R

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 660-A

RECOVERY NOTE, BENCH MARK

Designation Y 309 State Arizona County Pima

Nearest town Lukeville Distance and direction from nearest town 12.65 miles north

Character of mark Brass disk Established by U. S. Coast and Geodetic Survey

Present condition Good

Detailed report 5.1 miles north along the Sonoyta-Ajo highway from the post office at Lukeville, thence 0.1 mile east along a track road, thence 7.45 miles north along the old Sonoyta-Ajo road, on a low ridge between two washes, 119 feet northwest of the approximate center of the crossing of a wash, 418 feet west of the center line of the road, 2.2 feet east of a witness post, about level with the road, and set in the top of a concrete post projecting 0.3 foot above the ground.

R

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 660-A

RECOVERY NOTE, BENCH MARK

Designation U 110 State Arizona County Pima

Nearest town Lukeville Distance and direction from nearest town 15.75 miles north

Character of mark Bronze disk Established by U. S. Coast and Geodetic Survey

Present condition Good

Detailed report 5.1 miles north along the Sonoyta-Ajo highway from the post office at Lukeville, thence 0.1 mile east along a track road, thence 10.55 miles north along the old Sonoyta-Ajo highway, 368 feet north of the center of a wash, 30 feet west of the center line of the road, 2.0 feet south of a witness post, about level with the road, and set in the top of a concrete post projecting 0.3 foot above the ground.

R

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 660-A

RECOVERY NOTE, BENCH MARK

Designation W 110 State Arizona County Pima

Nearest town Lukeville Distance and direction from nearest town 11.6 miles

Character of mark Bronze disk Established by U. S. Coast and Geodetic Survey

Present condition Good

Detailed report 5.1 miles north along the Sonoyta-Ajo highway from the post office at Lukeville, thence 0.1 mile east along a track road, thence 6.4 miles north along the old Sonoyta-Ajo road, 138 feet southeast of the approximate center of the crossing of a large wash, 468 feet east of the center line of the road, 2.2 feet north of a witness post, about level with the road, and set in the top of a concrete post projecting 0.3 foot above the ground.

R

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 660-A

RECOVERY NOTE, BENCH MARK

Designation X 309 State Arizona County Pima

Nearest town Lukeville Distance and direction from nearest town 14.75 miles north

Character of mark Brass disk Established by U. S. Coast and Geodetic Survey

Present condition Good

Detailed report 5.1 miles north along the Sonoyta-Ajo highway from the post office at Lukeville, thence 0.1 mile east along a track road, thence 9.55 miles north along the old Sonoyta-Ajo road, 166 feet north of a point where the road crosses a wash, 60 feet west of the center line of the road, 2.0 feet east of a witness post, about level with the road, and set in the top of a concrete post projecting 0.3 foot above the ground.

R

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 660-A

RECOVERY NOTE, BENCH MARK

Designation Z 309 State Arizona County Pima

Nearest town Lukeville Distance and direction from nearest town 10.6 miles north

Character of mark Brass disk Established by U. S. Coast and Geodetic Survey

Present condition Good

Detailed report 5.1 miles north along the Sonoyta-Ajo highway from the post office at Lukeville, thence 0.1 mile east along a track road, thence 5.4 miles north along the old Sonoyta-Ajo road, 478 feet east of the center of the "Y" junction of a track road leading southwest, 2.0 feet west of a witness post, about level with the road, and set in the top of a concrete post projecting 0.3 foot above the ground.

R

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

by the
Coast and Geodetic Survey
SEALEVEL DATUM OF 1929

QUAD 321123

ARIZ.
LATITUDE 32°00' to 32°30'
LONGITUDE 112°30' to 113°00'
DIAGRAM NI 12-10 AJO

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 585-A

RECOVERY NOTE, BENCH MARK

Designation **X 110 Lukeville** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **9.55 miles north**
Character of mark **Bronze disk**
Established by **U. S. Coast and Geodetic Survey**
Present condition **Good**
Detailed report **5.1 miles north along the Sonoyta-Ajo highway from the post office at Lukeville, thence 0.1 mile east along a track road, thence 4.35 miles north along the old Sonoyta-Ajo road, 170 feet northwest of the center of the crossing of a wash, 39 feet west of the center line of the road, 1.4 feet east of a witness post, about level with the road, and set in the top of a concrete post projecting 0.4 foot above the ground.**

Nov. 1953

Stamping **X 110 1953****R**

DESCRIPTION OF BENCH MARK

Designation **D 109** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **4 miles south**
Character of mark **Bronze Disk**
Established by **United States Coast & Geodetic Survey**
Detailed description **0.15 miles southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to Highway 86, thence 1.9 miles east along Highway 86, thence 1.95 miles southwest and south along Darby Wells road, 0.1 mile southwest of a "W" junction of old Darby Wells Road, and the new road, at Darby Wells, 90.6 feet west of the Darby Well windmill from the southwest leg, 75 feet south of the center line of the road, 4.9 feet northwest of a fence line, 2.2 feet north of the witness post, in the top of a concrete post projecting 0.3 foot, and about 6 feet lower than the road.**

Stamping **D 109 1953**

DESCRIPTION OF BENCH MARK

Designation **H 307** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **4.95 miles south**
Character of mark **Bronze Disk**
Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to Highway 86, thence 1.9 miles east along Highway 86 to Darby Well Road, thence 2.9 miles southwest and south along Darby Wells Road to Bates Well, 0.95 mile southwest of Darby Well, at "W" junction of main road and a road leading northwest, 93 feet northeast of the center of "W" junction, 48 feet northwest of the center of the wash, 28 feet southeast of the centerline of road, 2.5 feet north of the witness post, in the top of a concrete post projecting 0.3 foot, and about 1 foot higher than the road.**

LINE 102Stamping **H 307 1952**

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 585-A

RECOVERY NOTE, BENCH MARK

Designation **R 16 (USGS)** State **Arizona** County **Pima**
Nearest town **Clarkston**
Distance and direction from nearest town **2.5 miles south**
Character of mark **Bronze Disk**
Established by **U. S. Geological Survey**
Present condition **Not found.**
Detailed report **This mark was thoroughly searched for but was not located. The old road described was not found, possibly due to extensive mining in the area.**

Jan. 1952

Stamping **R 16 1953****R**

DESCRIPTION OF BENCH MARK

Designation **R 17 (USGS)** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **5.9 miles south**
Character of mark **Bronze Disk**
Established by **United States Geological Survey**
Detailed description **0.15 miles southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo, to Highway 86, thence 1.9 miles east along Highway 86 to the junction of the Darby Wells Road, thence 3.85 miles southwest and south along the Darby Wells Road to the Bates Well, at a "W" junction of the main road and a dim road leading south-southeast, 23½ feet east of the center line of the main road, 11 feet west of the center line of a dim road leading south-southeast, 1.9 feet north of the witness post, in the top of a concrete post projecting 0.4 foot, and about 1 foot higher than the road.**

Stamping **R 17 1950**ORIGINAL DESCRIPTION

About 2.5 mi. S of Clarkston along old Sonita Road, 10 ft N of a custom sign in road fork; in concrete post. Bronze tablet Stamped R-16 1935^u Painted U.S.G.S. 1974.2 on sign post.

DESCRIPTION OF BENCH MARK

Designation **G 307** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **3.1 miles southeast**
Character of mark **Bronze Disk**
Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to Highway 86, thence 1.9 miles east along Highway 86, thence 1.05 miles southwest along the Darby Wells Road, set in about the center of a large boulder 15 x 9½ feet, and projecting 2½ feet above ground, 1.0 mile southwest of junction of Highway 86, 59½ feet west of the centerline of the road, 7.6 feet south of the north end of the boulder, and about 1½ feet higher than the road.**

Stamping **G 307 1952**

DESCRIPTION OF BENCH MARK

Designation **J 307** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **6.9 miles south**
Character of mark **Bronze Disk**
Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 miles southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to Highway 86, thence 1.9 miles east along Highway 86 to the junction of Darby Wells Road, thence 4.85 miles southwest and south along the Darby Wells Road, at the outside of a curve in the road, 33 feet west of the centerline of the road, 2.3 feet north of the witness post, in the top of a concrete post projecting 0.4 feet and about 1½ feet higher than the road.**

Stamping **J 307 1952**

GP

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

VERTICAL CONTROL DATA

by the
Coast and Geodetic Survey
SEA LEVEL DATUM OF 1929

QUAD 321123

PAGE NO. 11

ARIZ. 32°00' to 32°30'
LATITUDE 112°30' to 113°00'
LONGITUDE NI 12-10 AJO

Line 102

DESCRIPTION OF BENCH MARK

Designation **1739.8 (USGS)** State **Arizona** County **Pima**
Nearest town **Ajo** Distance and direction from nearest town **7.75 miles south**
Character of mark **Aluminum Cap** Stamping **SMC Exa**
Established by **U. S. Geological Survey** **MNC Exd**
Detailed description **0.15 miles southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to Highway 86, thence 1.9 miles east along Highway 86 to junction of Darby Well road, thence 5.7 miles southwest and south along Darby Well Road leading to Bates Well, 25½ feet west of the centerline of main road, 7½ feet west of the centerline of the old road, an aluminum cap on top of an 1½ inch iron pipe set in the center of a pile of rocks cemented together, projecting 3.3 feet above ground, and about 3 feet higher than the road.**

DESCRIPTION OF BENCH MARK

Designation **K 307** State **Arizona** County **Pima**
Nearest town **Ajo** Distance and direction from nearest town **7.85 miles south**
Character of mark **Bronze Disk** Stamping **K 307 1952**
Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to Highway 86, thence 1.9 miles east along Highway 86 to junction of Darby Well road, thence 5.8 miles southwest and south along Darby Well road leading to Bates Well, at a slight curve in the road and junction of dim road leading south-south-east, 30 feet east of the centerline of main road, 12½ feet northeast of the centerline of dim road leading south-south-east, 2.1 feet north of the witness post, in the top of a concrete post projecting 0.4 foot, and about 1 foot higher than the road.**

DESCRIPTION OF BENCH MARK

Designation **R 18 (USGS)** State **Arizona** County **Pima**
Nearest town **Ajo** Distance and direction from nearest town **8.65 miles south**
Character of mark **Bronze Disk** Stamping **R 18 1930**
Established by **United States Geological Survey**
Detailed description **0.15 miles southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to Highway 86, thence 1.9 miles east along Highway 86 to the junction of a road to Darby Well, thence 6.6 miles southwest and south along Darby Well Road leading to Bates Well, 23½ feet northwest of the center line of the new road, 12½ feet southeast of the center line of the old road, 1.7 feet north of the witness post, and in the top of a concrete post projecting 0.5 foot, and about 1 foot higher than the road.**

DESCRIPTION OF BENCH MARK

Designation **R 18 BM (USGS)** State **Arizona** County **Pima**
Nearest town **Ajo** Distance and direction from nearest town **8.65 miles south**
Character of mark **Copper nail and washer** Stamping
Established by **U. S. Geological Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to Highway 86, thence 1.9 miles east along the highway 86 to junction of road to Darby Well, thence 6.6 miles southwest and south along road to Darby Well leading to Bates Well, at a "Y" of main road and a road leading south, 69.9 feet southwest of U.S.G.S. R 18, 26½ feet southeast of the centerline of the old road, 2½ feet northwest of the centerline of the new road, a copper nail and washer set in top of a 4 x 4 foot post projecting 0.7 foot, and about 1 foot higher than road.**

DESCRIPTION OF BENCH MARK

Designation **L 307** State **Arizona** County **Pima**
Nearest town **Ajo** Distance and direction from nearest town **9.65 miles south**
Character of mark **Bronze Disk** Stamping **L 307 1952**
Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to Highway 86, thence 1.9 miles east along Highway 86 to junction of Darby Well Road, thence 7.6 miles southwest and south along Darby Well Road leading to Bates Well, 38 feet northwest of the centerline of new road, 16 feet southeast of the centerline of the old road, 2.0 feet south of the witness post, in the top of a concrete post projecting 0.5 foot, and about 1 foot higher than the road.**

DESCRIPTION OF BENCH MARK

Designation **M 307** State **Arizona** County **Pima**
Nearest town **Ajo** Distance and direction from nearest town **10.45 miles south**
Character of mark **Bronze Disk** Stamping **M 307 1952**
Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo, to Highway 86, thence 1.9 miles east along Highway 86 to junction of Darby Well road, thence 8.4 miles southwest and south along Darby Well Road leading to Bates Well, 66 feet west of the centerline of new road, 42 feet east of a small wash, 2.0 feet north of the witness post, in the top of a concrete post projecting 0.4 foot, and about ½ foot higher than the road.**

DESCRIPTION OF BENCH MARK

Designation **E 109** State **Arizona** County **Pima**
Nearest town **Ajo** Distance and direction from nearest town **10.7 miles south**
Character of mark **Bronze Disk** Stamping **E 109 1935**
Established by **United States Coast & Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo, to Highway 86, thence 1.9 miles east along Highway 86 to the junction of Darby Well Road, thence 8.4 miles southwest and south along Darby Well Road leading to Bates Well, to BM M 307, thence 0.25 mile west cross country, 90 feet east of the center of the old road and center of a wash, 31½ feet northwest of the center line of the old road, 1.9 feet north of the witness post, and set in the top of a concrete post projecting 0.3 foot above the ground, and about 1 foot higher than the old road.**

VERTICAL CONTROL DATA

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

by the
Coast and Geodetic Survey
SEA-LEVEL DATUM OF 1929

QUAD 321123

ARIZ.
LATITUDE 32°00' to 32°30'
LONGITUDE 112°30' to 113°00'
DIAGRAM NI 12-10 AJO

DESCRIPTION OF BENCH MARK

Designation N 307
Nearest town Ajo
Distance and direction from nearest town 11.75 miles south
Character of mark Bronze Disk
Established by U. S. Coast and Geodetic Survey
Detailed description 0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to Highway 86, thence 1.9 miles east along Highway 86 to junction of Darby Well Road, thence 9.7 miles southwest and south along Darby Well Road leading to Bates Well, to a "Y" junction, 1.35 miles southwest of the B. M. 307 along the new road, 0.05 mile south-west of "Y" junction and set in the fork of the "Y", 152 feet southeast of the centerline of road leading southwest, 48 feet west of the centerline of the road leading south to Bates Well, 1.9 feet west of the witness post, in a concrete post projecting 0.3 foot, and about level with the road.

DESCRIPTION OF BENCH MARK

Designation Q 307
Nearest town Ajo
Distance and direction from nearest town 15.9 miles south
Character of mark Bronze Disk
Established by U. S. Coast and Geodetic Survey
Detailed description 0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to Highway 86, thence 1.9 miles east along Highway 86 to junction of Darby Well Road, thence 13.85 miles southwest and south along the Darby Well and Bates Well Road, on the outside of a curve, 27½ feet southeast of the centerline of the road, 2.4 feet northeast of the witness post, in a concrete post projecting 0.3 foot, and about level with the road.

DESCRIPTION OF BENCH MARK

Designation F 109
Nearest town Ajo
Distance and direction from nearest town 12.75 miles south
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to Highway 86, thence 1.9 miles east along the Highway 86 to the junction of a road leading south to Darby Well, thence 10.7 miles southwest and south along a road leading to Darby Well and Bates Well, 248 feet east of the center line of the new road, 27½ feet west of the old road, 1.6 feet north of a witness post, and set in the top of a concrete post projecting 0.4 foot above the ground, and about level with the road.

DESCRIPTION OF BENCH MARK

Designation H 109
Nearest town Ajo
Distance and direction from nearest town 16.9 miles south
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to Highway 86, thence 1.9 miles east along the Highway 86 to a junction of Darby Well Road, thence 14.9 miles southwest and south along the Darby Well and Bates Well Road, on the outside of a curve of the old road, 0.25 mile southwest of a "Y" junction of a better road and the Bates Well Road, 109½ feet southeast of the center of a "Y" junction of the roads leading east, northeast, and west, 95 feet south of the road leading east from the center line of Bates Well Road, 51½ feet south of the center line of the road leading east, 1.7 feet east of a witness post, and set in the top of a concrete post projecting 0.3 foot above the ground, and about level with the road.

DESCRIPTION OF BENCH MARK

Designation P 307
Nearest town Ajo
Distance and direction from nearest town 13.75 miles south
Character of mark Bronze Disk
Established by U. S. Coast and Geodetic Survey
Detailed description 0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to Highway 86, thence 1.9 miles east along Highway 86 to road leading south to Darby Well, thence 11.7 miles southwest, and south along the road leading to Darby and Bates Wells, 47 feet west of the centerline of the old road, 45 feet southeast of the centerline of the new road, 2.2 feet east of a witness post, in a concrete post projecting 0.2 foot, and about level with the road.

DESCRIPTION OF BENCH MARK

Designation R 307
Nearest town Ajo
Distance and direction from nearest town 17.9 miles south
Character of mark Bronze Disk
Established by U. S. Coast and Geodetic Survey
Detailed description 0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to Highway 86, thence 1.9 mile east along Highway 86 to "Y" junction of Road South to Darby Well, thence 15.85 miles southwest and south along the Darby Well and Bates Well road, at a small draw at a low, rocky ridge, 71 feet east of the centerline of road, 2.0 feet southwest of the witness post, in a concrete post projecting 0.3 foot, and about 1½ feet higher than the road.

DESCRIPTION OF BENCH MARK

Designation Q 109
Nearest town Ajo
Distance and direction from nearest town 14.85 miles south
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to Highway 86, thence 1.9 mile east along Highway 86 to the junction of a road leading south to Darby Well, thence 12.75 miles southwest and south along Darby Well and Bates Well road, 0.15 mile north of the cattle guard for the Organ Pipe Cactus National Monument, 305 feet east of the center line of the new road, 30½ feet northwest of the center line of the old road, 1.5 feet north of the witness post, and about 2½ feet lower than the new road, and set in the top of a concrete post projecting 0.5 foot above the ground.

DESCRIPTION OF BENCH MARK

Designation K 110
Nearest town Ajo
Distance and direction from nearest town 18.4 miles south
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.15 miles southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to Highway 86, thence 1.9 miles east along Highway 86 to the junction of Darby Well Road, thence 16.35 miles southwest and south along the Darby Well and Bates Well Road, 41½ feet southeast of the center line of the main road, 15½ feet east of the center line of the road leading to Growler Canyon, 2.1 feet east of a witness post, in a concrete post projecting 0.4 feet, and about level with the road.

JANUARY 1963

VERTICAL CONTROL DATA

PAGE NO. 13

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

Coast and Geodetic Survey
by the
SEAL-LEVEL DATUM OF 1929

QUAD 321123
ARIZ. 32°00' to 32°30'
LONGITUDE 112°30' to 113°00'
DIAGRAM NI 12-10 AJO

Line 102

FORM 685A
(1-8-58)

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

RECOVERY NOTE, BENCH MARK

Designation K 109
Nearest town Ajo
Distance and direction from nearest town 19.55 miles south
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Present condition Good
Detailed report About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 2.4 miles southeast along State Highway 85; thence 1.9 miles southwest along an oiled road; thence 15.1 miles southwest and south along a graded dirt road to Bates Well and Henry Grays ranch house, about 0.2 mile west of the most easterly of three wells, 312 feet south of the southwest corner of the trail road ranch house, 57 feet south of the center of the junction of the trail road and a trail road leading east, 10 feet east of the center line of a north-south trail road, 19 feet northwest of an 18-inch forked tree at the west side of an old shack, at the west side of an old wooden fence, about level with the trail road, and set in the top of a concrete post projecting 2 inches.

R

DESCRIPTION OF BENCH MARK

Designation D 312
Nearest town Lukeville
Distance and direction from nearest town 35.45 miles northwest
Character of mark Bronze Disk
Established by U. S. Coast and Geodetic Survey
Detailed description 0.95 mile north along the Sonoyta-Ajo Highway from the Post office at Lukeville to junction, thence 14.05 miles west to Quitovaquito and "Y" junction, thence 14.35 miles north along Bates Well road to "Y" junction, thence 4.1 miles northeast along the old (very dim) Bates Well road to a large wash and end of truck travel, 208 feet southeast of the center of a large wash, 19 feet southeast of the centerline of the road, 9.1 feet northwest of a wire fence, 2.8 feet northwest of a witness post, a bronze disk brazed to the top of a 3 inch iron pipe projecting 0.6 foot.

FORM 685A
(1-8-58)

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

RECOVERY NOTE, BENCH MARK

Designation T14S R7W (G.L.O.)
Nearest town Ajo
Distance and direction from nearest town 19.75 miles south
Character of mark A General Land Office Cap
Established by General Land Office
Present condition Good
Detailed report About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 2.4 miles southeast along State Highway 85; thence 1.9 miles southwest along an oiled road; thence 15.1 miles southwest and south along a graded dirt road to Bates Well and Henry Grays ranch house; thence 0.2 mile northeast along a trail road, about 0.25 mile northeast of Henry Grays ranch house, 147.2 feet northwest of Bench Mark J 109, 13 feet south of the center line of the trail road, 8 feet southeast of an old trail road leading northeast, about 1 foot above the level of the trail road, a cap on a metal pipe.

R

DESCRIPTION OF BENCH MARK

Designation L 342
Nearest town Ajo
Distance and direction from nearest town 20.55 miles south
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 2.4 miles southeast along State Highway 85; thence 1.9 miles southwest along an oiled road; thence 15.1 miles southwest and south along a graded dirt road to Bates Well and Henry Grays ranch house; thence 1.0 mile west along a trail road, 0.15 mile west of a 4x4-inch white wooden reference post which projects 16 feet and is numbered 50, 0.4 mile northeast of an abandoned mine, 148 feet south of the center line of the trail road, 18 feet west of a rock cairn, about 40 feet above the level of the trail road, set in the top of a rock outcrop on top of a rocky knoll and projects 6 inches.

NOTE: Not leveled over by this party in 1962.

FORM 685A
(1-8-58)

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

RECOVERY NOTE, BENCH MARK

Designation J 109
Nearest town Ajo
Distance and direction from nearest town 19.75 miles south
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Present condition Good
Detailed report About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 2.4 miles southeast along State Highway 85; thence 1.9 miles southwest along an oiled road; thence 15.1 miles southwest and south along a graded dirt road to Bates Well and Henry Grays ranch house; thence 0.2 mile northeast along a trail road, 1.05 miles east of a 4x4-inch white wooden reference post which projects 16 feet and is numbered 50, about 0.25 mile northeast of Henry Grays ranch house, about 0.2 mile north of the most easterly of three wells, 32 feet southwest of the center line of the trail road, 191 feet northeast of a fence corner, 147.2 feet southeast of T14S R7W (G.L.O.), 1.0 feet south of a metal witness post, about level with the trail road, and set in the top of a concrete post projecting 3 inches.

R

DESCRIPTION OF BENCH MARK

Designation L 109
Nearest town Lukeville
Distance and direction from nearest town 32.45 miles northwest
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.95 mile north along the Sonoyta-Ajo Highway from the Post Office at Lukeville to a junction, thence 14.05 miles west to Quitovaquito and a "Y" junction, thence 14.35 miles north along Bates Well Road to a "Y" junction, thence 3.1 mile northeast along the old (very dim) Bates Well Road, and about 1 mile west of a deeply cut saddle in the mountains, 248 feet southeast of the center line of the road, 1.7 feet north of a witness post, and set in the top of a concrete post projecting 0.5 foot above the ground, and about level with the road.

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

by the
Coast and Geodetic Survey
SEA-LEVEL DATUM OF 1929

QUAD 321123

ARIZ. 32°00' to 32°30'
LATITUDE 112°30' to 113°00'
LONGITUDE
DIAGRAM NI 12-10 AJO

DESCRIPTION OF BENCH MARK

Designation M 342 State Arizona County Pima
Nearest town Ajo Chief of party D. Moncevicz
Distance and direction from nearest town 21.4 miles southwest Leveling date January 1962
Character of mark A C&GS Bench Mark Disk Stamping M 342 1961

Established by C&GS
Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 2.4 miles southeast along State Highway 85; thence 1.9 miles southwest along an oiled road; thence 15.1 miles southwest and south along a graded dirt road to Bates Well and Henry Grays ranch house; thence 1.85 miles west along a trail road, 2.3 miles general easterly direction of a 4x4-inch white wooden reference post which projects 16 feet and is numbered 49, 1.0 mile west of a 4x4-inch white wooden reference post which projects 16 feet and is numbered 50, 0.45 mile west of an abandoned mine, 123 feet north of the center line of the trail road, 1 1/2 feet south of a rock cairn, about 20 feet above the level of the trail road, set flush in the top of a rock outcrop on the south slope of a rocky knoll.

DESCRIPTION OF BENCH MARK

Designation N 342 State Arizona County Pima
Nearest town Ajo Chief of party D. Moncevicz
Distance and direction from nearest town 22.4 miles southwest Leveling date January 1962
Character of mark A C&GS Bench Mark Disk Stamping N 342 1961

Established by C&GS
Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 2.4 miles southeast along State Highway 85; thence 1.9 miles southwest along an oiled road; thence 15.1 miles southwest and south along a graded dirt road to Bates Well and Henry Grays ranch house; thence 2.85 miles southwest along a trail road, 1.3 miles east of a 4x4-inch white wooden reference post which projects 16 feet and is numbered 48, 0.3 miles southwest of the junction of the trail road and a trail road leading south, 1.45 miles southwest of an abandoned mine, 63 feet northwest of the center line of the trail road, 1.7 feet northeast of a metal witness post, about 1 1/2 feet above the level of the trail road, and set in the top of a concrete post projecting 6 inches.

DESCRIPTION OF BENCH MARK

Designation C 312 State Arizona County Pima
Nearest town Lukeville
Distance and direction from nearest town 31.5 miles northwest Stamping C 312 1952

Established by U. S. Coast and Geodetic Survey
Detailed description 0.95 mile north along the Sonoyta-Ajo Highway from the post office at Lukeville to junction, thence 14.05 miles west to Quitovaquito and "W" junction, thence 14.35 miles north along Bates Well Road to "W" junction, thence 2.15 miles northeast along the old (very dim) Bates Well Road, 23 1/2 feet northwest of the centerline of road, 2.2 feet south of the witness post, a bronze disk brazed on top of a 3 inch iron pipe projecting 0.7 foot and about 1/2 foot higher than the road.

DESCRIPTION OF BENCH MARK

Designation N 309 State Arizona County Pima
Nearest town Ajo
Distance and direction from nearest town 17.5 miles southeast Stamping N 309 1952

Character of mark Sheet Brass Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.15 miles southeast along the Tucson, Cornelia & Gila Bend Railroad from the station at Ajo to Highway 86, thence 16.35 miles southeast along Highway 86 to the intersection of road north and road south to Kerwoo, thence 1 mile south along a road leading south to Kerwoo, 48 1/2 feet southwest of the center line of the road, 2.1 feet north of the witness post, and about level with the road, and set in a concrete post projecting 0.4 foot.

DESCRIPTION OF BENCH MARK

Designation U 309 State Arizona County Pima
Nearest town Ajo
Distance and direction from nearest town 18.35 miles southeast Stamping U 309 1952

Character of mark Sheet Brass Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.15 miles southeast along the Tucson, Cornelia & Gila Bend Railroad from the station at Ajo to Highway 86, thence 16.35 miles southeast along Highway 86 to an intersection, thence 1.85 miles south along a road leading south to Kerwoo, 0.15 mile northwest of a cattle guard across the road and fence line, set in the top of the center of a large outcrop (lava) at the edge of the road, and at the northeast end of a rocky point, and about 1/2 way between turns in the road, 26 feet southeast of a telephone pole where the telephone line crosses the road, 26 feet southwest of the center line of the road, and about 1 1/2 feet higher than the road, and marked with white painted letters B M.

DESCRIPTION OF BENCH MARK

Designation T 309 State Arizona County Pima
Nearest town Ajo
Distance and direction from nearest town 19.55 miles southeast Stamping T 309 1952

Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.15 miles southeast along the Tucson, Cornelia & Gila Bend Railroad from the station at Ajo to Highway 86, thence 16.35 miles southeast along Highway 86 to an intersection of a road north and a road leading south to Kerwoo, thence 3.05 miles south along a road leading south to Kerwoo, 44 1/2 feet east of the center line of the road, 2 feet north of the witness post, and about 1/2 foot lower than the road, and set in a concrete post projecting 0.4 foot.

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

Coast and Geodetic Survey
by the
SEA LEVEL DATUM OF 1929

QUAD 321123
ARIZ.
LATITUDE 32°00' to 32°30'
LONGITUDE 112°30' to 113°00'
DIAGRAM NI 12-10 AJO

Line 103

DESCRIPTION OF BENCH MARK

Designation M 110 State Arizona County Pima
Nearest town Walls Well
Distance and direction from nearest town 3.5 miles northeast
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description This mark was not found, a new road has been constructed.

ORIGINAL DESCRIPTION

About 3.3 mi E & N, from Walls Well, along Bates Wells -
Walls Well and Kerwo roads, about 3.1 mi S of the Tucson-Ajo Highway,
along Kerwo road, 0.7 mi S of a wash at the south toe of and about
150 feet S of the center of a small hill, 56 ft E of the centerline
of the road. A concrete post.

Recovered as described
Date 1/61 By U.S.C.S.

FORM 685A
(1-8-58)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

RECOVERY NOTE, BENCH MARK

Designation S 309 State Arizona County Pima
Nearest town Ajo
Distance and direction from nearest town 20.55 miles southeast
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Present condition Good
Detailed report About 0.15 mile southeast along the Tucson, Cornelia and Gila
Bend Railroad from the station at Ajo; thence 10.8 miles southeast along
State Highway 85; thence 5.55 miles southeast along State Highway 86;
thence 4.05 miles southeast along a graded dirt road; 1.1 miles north of a
junction of roads, 48 feet west of the center line of the road, 87 feet
south of a telephone pole, 0.7 foot west of a metal witness post, about
level with the road, and set in the top of a concrete post projecting 3
inches.

FORM 685A
(1-8-58)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

RECOVERY NOTE, BENCH MARK

Designation N 110 State Arizona County Pima
Nearest town Ajo
Distance and direction from nearest town 21.65 miles southeast
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Present condition Good
Detailed report About 0.15 mile southeast along the Tucson, Cornelia and Gila
Bend Railroad from the station at Ajo; thence 10.8 miles southeast along
State Highway 85; thence 5.55 miles southeast along State Highway 86;
thence 5.15 miles southeast along a graded dirt road; 57 feet southwest of the center
line of the road, 38 feet east of the center line of the trail road, 1.1
feet southwest of a metal witness post, about level with the roads, and
set in the top of a concrete post projecting 8 inches.

DESCRIPTION OF BENCH MARK

Designation P 110 State Arizona County Pima
Nearest town Ajo
Distance and direction from nearest town 22 miles southeast
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.15 miles southeast along the Tucson, Cornelia & Gila Bend Railroad
from the station at Ajo to Highway 86, thence 16.35 miles southeast along Highway
86 to an intersection of roads leading north and south to Kerwo, thence 5.15 miles
south along the Kerwo road to a "Y" junction of a road leading southwest to Walls
Well, thence 0.35 miles southwest along a road leading southwest to Walls Well, 1.1
miles northeast of Walls Well, 59 feet east of the center line of the road, 1.5 feet
west of the witness post, and about 2 feet higher than the road, and set in a concrete
post projecting 0.4 foot.

DESCRIPTION OF BENCH MARK

Designation R 309 State Arizona County Pima
Nearest town Ajo
Distance and direction from nearest town 23.1 miles southeast
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.15 miles southeast along the Tucson, Cornelia & Gila Bend Railroad
from the station at Ajo to Highway 86, thence 16.35 miles southeast along the High-
way 86 to an intersection of road north and south, thence 5.15 miles south along a
road leading to Kerwo to a "Y" junction of a road leading southwest to Walls Well,
thence 1.45 miles southwest along a road leading to Walls Well, at Walls Well and
near the northeast corner of a corral, 168 feet southeast of the center line of the
road leading west to Bates Well, 7.2 feet southwest of the northeast corner of a
pole corral, 1.8 feet northwest of the pole corral fence, 1.7 feet east of the witness
post, and about level with the road, and set in a concrete post projecting 0.2 foot.

DESCRIPTION OF BENCH MARK

Designation Q 110 State Arizona County Pima
Nearest town Ajo
Distance and direction from nearest town 25.75 miles southeast
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.15 miles southeast along the Tucson, Cornelia & Gila Bend Railroad
from the station at Ajo to Highway 86, thence 10.8 miles southeast along Highway 86
to a "Y" junction of Sonoyta-Ajo Highway leading south, thence 9.15 miles south
along the Sonoyta-Ajo Highway to an intersection, thence 5.65 miles east along a
track road leading east to Walls Well, 0.95 mile west of Walls Well, 308 feet south-
west of the center line of the road, 1.6 feet north of the witness post, and about
level with the road, and set in a concrete post projecting 0.4 foot.

DESCRIPTION OF BENCH MARK

Designation Q 309 State Arizona County Pima
Nearest town Ajo
Distance and direction from nearest town 24.65 miles southeast
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.15 miles southeast along the Tucson, Cornelia & Gila Bend Railroad
from the station at Ajo to Highway 80, thence 10.8 miles southeast along Highway 86
to a "Y" junction, thence 9.15 miles south along the Sonoyta-Ajo Highway to an inter-
section, thence 4.65 miles east along a track road leading east to Walls Well, at a
point where the road crosses a wash, 968 feet southwest of the center of a road and
a wash crossing, 328 feet south of the center line of the road, 2.8 feet north of the
witness post, and about level with the road, and set in a concrete post projecting
0.2 foot.

VERTICAL CONTROL DATA

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

by the
Coast and Geodetic Survey
SEALEVEL DATUM OF 1929

QUAD 321123

ARIZ.
LATITUDE 32°00' to 32°30'
LONGITUDE 112°30' to 113°00'
DIAGRAM NI 12-10 AJO

DESCRIPTION OF BENCH MARK

Designation **R 110** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **23.55 miles southeast**
Character of mark **Bronze Disk**
Established by **United States Coast & Geodetic Survey**
Detailed description **0.15 miles southeast along the Tucson, Cornelia & Gila Bend Railroad from the station at Ajo to Highway 86, thence 10.8 miles southeast along Highway 85 to a "Y" junction, thence 9.15 miles south along the Sonoyta-Ajo Highway to an intersection, thence 3.45 miles east along a track road leading east to Walls Well, at a slight turn in the road and north of the witness post, 22½ feet north of the center line of the road, 1.3 feet south of the witness post, and about level with the road, and set in a concrete post projecting 0.5 foot.**

DESCRIPTION OF BENCH MARK

Designation **P 309** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **22.45 miles southeast**
Character of mark **Bronze Disk**
Established by **United States Coast & Geodetic Survey**
Detailed description **0.15 miles southeast along the Tucson, Cornelia & Gila Bend Railroad from the station at Ajo to Highway 86, thence 10.8 miles southeast along Highway 85 to a "Y" junction, thence 9.15 miles south along Sonoyta-Ajo Highway to an intersection, thence 2.35 miles east along track road leading east to Walls Well, at a point where the road crosses a wash, 99 feet northeast of the center of the road and wash crossing, 21 feet north of the center line of the road, 2.2 feet south of the witness post, and about level with the road, and set in a concrete post projecting 0.5 foot.**

DESCRIPTION OF BENCH MARK

Designation **S 110** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **21.45 miles southeast**
Character of mark **Bronze Disk**
Established by **United States Coast & Geodetic Survey**
Detailed description **0.15 miles southeast along the Tucson, Cornelia & Gila Bend Railroad from the station at Ajo, to Highway 86, thence 10.8 miles southeast along Highway 86 to a "Y" junction, thence 9.15 miles south along the Sonoyta-Ajo Highway to an intersection, thence 1.35 miles east along a track road, at a point where a small wash crosses the road, 5½ feet southwest of the center of the road and wash, 28 feet south of the center line of the road, 1.3 feet north of the witness post, and about ½ foot higher than the road, and set in a concrete post projecting 0.2 foot.**

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
1963 5054

RECOVERY NOTE, BENCH MARK

Designation **K 309** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **20.4 miles southeast**
Character of mark **Bronze disk**
Established by **U. S. Coast and Geodetic Survey**
Present condition **Good**
Detailed report **0.15 mile southeast along the Tucson, Cornelia & Gila Bend railroad from the station at Ajo, thence 10.75 miles southeast along State Highway 86, thence 9.0 miles south along the Sonoyta-Ajo highway, thence 0.5 mile east along a track road, 70½ feet southwest of the center of a small wash, 29 feet north of the center line of the road, 2.1 feet south of a witness post, about ½ foot higher than the road, and set in the top of a concrete post projecting 0.2 foot above the ground.**
Note: This mark was recovered by the mark setter as an extra tie mark. It was not leveled to during the 1953 leveling in this vicinity.

DESCRIPTION OF BENCH MARK

Designation **E 309** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **21.0 miles southeast**
Character of mark **Bronze Disk**
Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to Highway 86, thence 10.8 miles south along the Sonoyta-Ajo Highway to intersection, thence 0.9 mile west along track road, 0.9 mile west of the intersection of Sonoyta-Ajo Highway, 31 feet south of the centerline of track road, 1.9 feet north of the witness post, in a concrete post projecting 0.2 foot, and about level with the road.**

DESCRIPTION OF BENCH MARK

Designation **F 309** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **21.9 miles south**
Character of mark **Bronze Disk**
Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to junction, thence 10.8 miles southeast along Highway 86 to "Y" junction, thence 9.15 miles south along Sonoyta-Ajo Highway to intersection, thence 1.8 miles west along track road, 40 feet north of the centerline of road, 2.2 feet south of the witness post, in a concrete post projecting 0.3 foot, and about level with the road.**

DESCRIPTION OF BENCH MARK

Designation **G 309** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **22.8 miles south**
Character of mark **Bronze Disk**
Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to junction, thence 10.8 miles southeast along Highway 86 to "Y" junction, thence 9.15 miles south along Sonoyta-Ajo Highway to intersection, thence 2.7 miles west along track road, 41 feet south of the centerline of the road, 2.3 feet north of the witness post, in a concrete post projecting 0.5 foot, and about level with the road.**

DESCRIPTION OF BENCH MARK

Designation **P 22 (USGS)** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **23.6 miles south**
Character of mark **Bronze Disk**
Established by **U. S. G. S.**
Detailed description **0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad to junction, thence 10.8 miles southeast along Highway 86 to "Y" junction, thence 9.15 miles south along the Sonoyta-Ajo Highway to an intersection, thence 3.5 miles west along a track road, 20 feet south of the centerline of the road, 1.8 feet north of the witness post, in a concrete post projecting 0.4 foot, and about 1 foot higher than the road.**

Note: The 3 in 1930 is stamped backwards i.e. 19EO

PUBLISHED AND PRINTED BY:
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COAST AND GEODETIC SURVEY
WASHINGTON D. C.

by the
Coast and Geodetic Survey
SEA-LEVEL DATUM OF 1929

QUAD 321123
ARIZ. LATITUDE 32°00' to 32°30'
LONGITUDE 112°30' to 113°00'
DIAGRAM NI 12-10 AJO

DESCRIPTION OF BENCH MARK

Designation **W 308** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **24.65 miles south**
Character of mark **Bronze Disk**
Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to junction, thence 0.8 miles southeast along Highway 86 to "Y" junction, thence 9.15 miles south along Sonoyta-Ajo Highway to intersection, thence 4.55 miles west along track road, 50 feet southwest of the center of a wash, 36½ feet north of the centerline of the road, 18 feet northwest of a tree, 1.9 feet south of the witness post, in a concrete post projecting 0.3 foot, and about level with the road.**

DESCRIPTION OF BENCH MARK

Designation **1595.1 (USGS)** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **24.7 miles south**
Character of mark **copper nail and washer**
Established by **U.S.G.S.**
Detailed description **0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to junction, thence 10.8 miles southeast along Highway 86 to "Y" junction, thence 9.15 miles south along Sonoyta-Ajo Highway to intersection, thence 4.6 miles along track road, 54½ feet west of B. M. W 308, 15½ feet south of the centerline of the road, a copper nail and washer set on top of a 4 x 4 wood post projecting 0.6 foot, and about level with the road.**

DESCRIPTION OF BENCH MARK

Designation **X 308** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **25.4 miles south**
Character of mark **Bronze Disk**
Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to junction, thence 10.8 miles southeast along Highway 86 to "Y" junction, thence 9.15 miles south along the Sonoyta-Ajo Highway to intersection, thence 5.5 miles west along track road, 77 feet southeast of the center of road at point where wash crosses, 39 feet south of the centerline of the road, 2.2 feet east of the witness post, in a concrete post projecting 0.3 foot, and about ½ foot higher than the road.**

DESCRIPTION OF BENCH MARK

Designation **Y 308** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **26.25 miles south**
Character of mark **Bronze Disk**
Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to junction, thence 10.8 miles southeast along Highway 86 to "Y" junction, thence 9.15 miles south along the Sonoyta-Ajo Highway to intersection, thence 6.15 miles west along track road, 103½ feet northwest of the center of road at point where wash crosses, 49 feet north of the centerline of the road, 1.9 feet south of the witness post, in a concrete post projecting 0.2 foot, and about level with the road.**

DESCRIPTION OF BENCH MARK

Designation **R 21 RM (USGS)** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **26.85 miles south**
Character of mark **Copper Nail & Washer**
Established by **United States Geological Survey**
Detailed description **0.15 miles southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to a junction, thence 10.8 miles southeast along Highway 86 to a "Y" junction, thence 9.15 miles south along the Sonoyta-Ajo Highway to an intersection, thence 6.75 miles west along track road, at an intersection of track roads leading north-south and east-west, 79 feet east of B.M. R 21, 63½ feet east of the center line of the north-south road, 31 feet north of the center line of the east-west road, a copper nail and washer in the top of a 4 by 4 wooden post projecting 0.6 foot.**

DESCRIPTION OF BENCH MARK

Designation **R 21 (USGS)** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **26.85 miles south**
Character of mark **Bronze Disk**
Established by **United States Geological Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to a junction, thence 10.8 miles southeast along Highway 86 to a "Y" junction, thence 9.15 miles south along Sonoyta-Ajo Highway to an intersection, thence 6.75 miles along a track road leading west, at the intersection of track roads north-south and east-west, 53 feet north of the center line of a road east-west, 22½ feet southwest of the center of north road and a small wash, 15 feet west of the center line of the road leading north, 1.4 feet east of the witness post, in a concrete post projecting 0.3 foot, and about even with the road in elevation.**

DESCRIPTION OF BENCH MARK

Designation **H 309** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **27.9 miles south**
Character of mark **Bronze Disk**
Established by **U. S. Coast and Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to junction, thence 10.8 miles southeast along Highway 86 to "Y" junction, thence 9.15 miles south along the Sonoyta-Ajo Highway to intersection, thence 7.8 miles west along track road, 1.05 mile west of intersection of north-south and east-west track roads, 37 feet south of the centerline of road, 1.9 feet north of the witness post, in a concrete post projecting 0.2 foot and about level with the road.**

DESCRIPTION OF BENCH MARK

Designation **H 110** State **Arizona** County **Pima**
Nearest town **Ajo**
Distance and direction from nearest town **28.9 miles south**
Character of mark **Bronze Disk**
Established by **United States Coast & Geodetic Survey**
Detailed description **0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to a junction, thence 10.8 miles southeast along Highway 86 to a "Y" junction, thence 9.15 miles south along the Sonoyta-Ajo Highway to an intersection, thence 8.8 miles west along a track road, 29½ feet south of the center line of the road, 1.9 feet north of the witness post, in a concrete post projecting 0.2 foot, and about level with the road.**

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

by the
Coast and Geodetic Survey
SEA LEVEL DATUM OF 1929

QUAD 321123

ARIZ.
LATITUDE 32°00' to 32°30'
LONGITUDE 112°30' to 113°00'
DIAGRAM NI 12-10 AJO

DESCRIPTION OF BENCH MARK

Designation J 309 State Arizona County Pima
Nearest town Ajo
Distance and direction from nearest town 29.9 miles south
Character of mark Bronze Disk
Established by U. S. Coast and Geodetic Survey
Detailed description 0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to junction, thence 10.8 miles southeast along Highway 86 to "Y" junction, thence 9.15 miles south along the Sonoyta Ajo Highway to intersection, thence 9.8 miles along a track road west, at the wash where truck travel ends, about 0.5 mile southeast of the canyon mouth, 11½ feet east of the center of wash at point where road crosses, 46 feet southwest of the center of a small wash, 20 feet northeast of the centerline of the road, 2.1 feet south of the witness post, in a concrete post projecting 0.3 foot, and about ½ foot higher than the road.

DESCRIPTION OF BENCH MARK

Designation J 110 State Arizona County Pima
Nearest town Ajo
Distance and direction from nearest town 19.3 miles south
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.15 mile southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo to a junction, thence 1.9 miles east along Highway 86 to a junction, thence 16.35 miles southwest and south along Darby Well Road to a junction of the old Bates Well Road and a track road east, travel 0.95 mile east along a track road leading thru canyon, on the east side of a canyon mouth bearing to the northeast, 0.95 mile southeast of BM K 110, and the "Y" junction of the Darby Well Road and Bates Well Road, 21½ feet northeast of the center line of the dim track road, 2.4 feet south of a witness post, in a concrete post projecting 0.2 foot, and about 1½ feet higher than the road.

LINE 104

DESCRIPTION OF BENCH MARK

Designation G 110 State Arizona County Pima
Nearest town Ajo
Distance and direction from nearest town 27.7 miles south
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.15 miles southeast along the Tucson, Cornelia, and Gila Bend Railroad from the station at Ajo, thence 10.8 miles southeast along Highway 86 to a "Y" junction, thence 9.15 miles south along Ajo-Sonoyta Highway to an intersection, thence 6.75 miles west along a track road to an intersection, thence 0.85 mile south along a dim track road leading to Quitoviquito, 0.85 mile south of BM R 21 (1935) at a road intersection, 28 feet east of the center line of the road, 1.7 feet south of the witness post, and about 1 foot higher than the road, and set in a concrete post projecting 0.4 foot.

DESCRIPTION OF BENCH MARK

Designation D 309 State Arizona County Pima
Nearest town Ajo
Distance and direction from nearest town 28.7 miles south
Character of mark Sheet Brass Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo, thence 10.8 miles southeast along Highway 86 to a "Y" junction, thence 9.15 miles south along Ajo-Sonoyta Highway to an intersection, thence 6.75 miles west along a track road to an intersection, thence 1.85 miles south along a dim track road, 0.4 mile north of a point where the road crosses a large wash, 29 feet east of the center line of the road, 2.2 feet west of the witness post, and about level with the road, and set in a concrete post projecting 0.4 foot.

DESCRIPTION OF BENCH MARK

Designation F 110 State Arizona County Pima
Nearest town Ajo
Distance and direction from nearest town 29.65 miles south
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo, thence 10.8 miles southeast along Highway 86 to a "Y" junction, thence 9.15 miles south along Ajo-Sonoyta Highway to an intersection, thence 6.75 miles west along a track road to an intersection, thence 2.8 miles south along a dim track road, 0.55 miles south of a point where the road crosses a large wash, 31 feet west of the center line of the road, 14 feet east of the center of a small wash, 1.7 feet south of the witness post, and about level with the road, and set in a concrete post projecting 0.7 foot.

DESCRIPTION OF BENCH MARK

Designation G 309 State Arizona County Pima
Nearest town Lukeville
Distance and direction from nearest town 32.65 miles northwest
Character of mark Sheet Brass Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.95 mile north along the Sonoyta-Ajo Highway from the post office and store at Lukeville, thence 14.05 miles west along a road leading north to Bates Well and Ajo to a "Y" junction, thence 7.7 miles northeast along a road leading to Dripping Springs, thence 6.7 miles north and northeast along a road leading to Growler Canyon to a junction, thence 2.8 miles northeast and north along a road, 1.05 miles south of BM F 110, 48½ feet east of the center of a small wash, 24½ feet west of the center line of the road, 1.6 feet south of the witness post, and about 1½ feet higher than the road, and set in a concrete post projecting 0.5 foot.

DESCRIPTION OF BENCH MARK

Designation E 110 State Arizona County Pima
Nearest town Lukeville
Distance and direction from nearest town 31.55 miles northwest
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.95 mile north along the Sonoyta-Ajo Highway from the post office and store at Lukeville, thence 14.05 miles west along a road leading north to Bates Well and Ajo to a "Y" junction, thence 0.45 miles north along a road leading north to Dripping Springs, thence 6.7 miles northeast along a road leading to Growler Canyon to a junction, thence 1.7 miles northeast along a road leading northeast and north, 51.4 feet south of an iron pole (signal pole), 30½ feet west across a road leading south from the center of a small wash, 36 feet southeast of the center line of the main road (route of the line), 15 feet west of the center line of the road leading south, 1.7 feet north of the witness post, and about level with the road, and set in a concrete post projecting 0.5 foot.

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

Coast and Geodetic Survey
SEA-LEVEL DATUM OF 1929

QUAD 321123
ARIZ.
LATITUDE 32°00' to 32°30'
LONGITUDE 112°30' to 113°00'
DIAGRAM NI 12-10 AJO

Line 104

DESCRIPTION OF BENCH MARK

Designation B 309
Nearest town Lukeville
State Arizona
County Pima
Distance and direction from nearest town 30.85 miles northwest
Character of mark Sheet Brass Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.95 mile north along the Sonoyta-Ajo Highway from the post office and store at Lukeville, thence 14.05 miles west along a road leading to Quitovaquito to a "Y" junction, thence 0.45 miles north along a road leading north to Bates Well and Ajo to a "Y" junction, thence 7.7 miles northeast along a road leading to Dripping Springs, thence 6.7 miles north and northeast along a road leading to Growler Canyon to a junction, thence 1 mile northeast along a road, 1 mile northeast of BM D 110, and about 0.6 miles southwest of the southern most wash of two, 28 1/2 feet northwest of the center line of the road, 1.7 feet south of the witness post, and about 3/4 foot higher than the road, and in a concrete post projecting 0.2 foot.

DESCRIPTION OF BENCH MARK

Designation D 110
Nearest town Lukeville
State Arizona
County Pima
Distance and direction from nearest town 29.85 miles northwest
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.95 mile north along the Sonoyta-Ajo Highway from the post office and store at Lukeville, thence 14.05 miles west along a road leading to Quitovaquito to a "Y" junction, thence 0.45 miles north along a road leading north to Bates Well and Ajo to a "Y" junction, thence 7.7 miles northeast along a road leading to Dripping Springs, thence 6.7 miles north and northeast along a road leading to Growler Canyon, at an intersection of roads to, Dripping Springs, Growler Canyon, and Quitovaquito Road, line turns northeast at this mark, 46 feet west across the road leading to Growler Canyon from the center line of the old road leading to Dripping Springs, 28 1/2 feet west of the center line of the road leading to Growler Canyon, 1.9 feet north of the witness post, and about level with the road, and set in a concrete post projecting 0.3 foot.

DESCRIPTION OF BENCH MARK

Designation A 309
Nearest town Lukeville
State Arizona
County Pima
Distance and direction from nearest town 29 miles northwest
Character of mark Sheet Brass Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.95 mile north along the Sonoyta-Ajo Highway from the post office and store at Lukeville, thence 14.05 miles west along a road leading to Quitovaquito to a "Y" junction, thence 0.45 miles north along a road leading north to Bates Well and Ajo to a "Y" junction, thence 7.7 miles northeast along a road leading to Dripping Springs, thence 5.85 miles north and northeast along a road leading to Growler Canyon, on a low ridge between two washes running north and south, 10 1/2 feet east across the road from the east bank of a wash, 80 feet west of the west bank of a wash, 35 1/2 feet southeast of the center line of the road, 2.3 feet north of the witness post, and about 1 foot higher than the road, and set in a concrete post projecting 0.4 foot.

DESCRIPTION OF BENCH MARK

Designation C 110
Nearest town Lukeville
State Arizona
County Pima
Distance and direction from nearest town 27.9 miles northwest
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.95 miles north along the Sonoyta-Ajo Highway from the post office and store at Lukeville, thence 14.05 miles west along a road leading to Quitovaquito to a "Y" junction, thence 0.45 miles north along a road leading north to Bates Well and Ajo to a "Y" junction, thence 7.7 miles northeast along a road leading to Dripping Springs, thence 4.75 miles north and northeast along a road leading to Growler Canyon, and about 115 yards northwest of a low rocky ridge, 61 feet north of the center of a small wash, 28 1/2 feet south of the center line of the road, 1.8 feet north of the witness post, and about level with the road, and set in a concrete post projecting 0.4 foot.

DESCRIPTION OF BENCH MARK

Designation Z 308
Nearest town Lukeville
State Arizona
County Pima
Distance and direction from nearest town 26.8 miles northwest
Character of mark Sheet Brass Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.95 miles north along the Sonoyta-Ajo Highway from the post office and store at Lukeville, thence 14.05 miles west along a road leading to Quitovaquito to a "Y" junction, thence 0.45 miles north along a road leading north to Bates Well and Ajo to a "Y" junction, thence 7.7 miles northeast along a road leading to Dripping Springs, thence 5.85 miles north and northeast along a road leading to Growler Canyon, at a point where the road crosses a small wash, 58 feet west of the center of the road and wash, 2 1/2 feet north of the center line of the road, 2.2 feet south of the witness post, and about level with the road, and set in a concrete post projecting 0.3 foot.

DESCRIPTION OF BENCH MARK

Designation B 110
Nearest town Lukeville
State Arizona
County Pima
Distance and direction from nearest town 25.7 miles northwest
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.95 miles north along the Sonoyta-Ajo Highway from the post office and store at Lukeville, thence 14.05 miles west along a road leading to Quitovaquito to a "Y" junction, thence 0.45 miles north along a road leading north to Bates Well and Ajo to a "Y" junction, thence 7.7 miles northeast along a road leading to Dripping Springs, thence 2.55 miles north and northeast along a road leading to Growler Canyon, at a point where the road crosses a wash, and about 15 yards north of the north edge of a wash, 70 feet northeast of the center of the road and wash, 28 1/2 feet southeast of the center line of the road, 1.8 feet south of the witness post, and about level with the road, and in a concrete post projecting 0.4 foot above the ground.

DESCRIPTION OF BENCH MARK

Designation V 308
Nearest town Lukeville
State Arizona
County Pima
Distance and direction from nearest town 24.7 miles northwest
Character of mark Sheet Brass Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.95 miles north along the Sonoyta-Ajo Highway from the post office and store at Lukeville, thence 14.05 miles west along a road leading to Quitovaquito to a "Y" junction, thence 0.45 miles north along a road leading north to Bates Well and Ajo to a "Y" junction, thence 7.7 miles northeast along a road leading to Dripping Springs, thence 1.55 miles north and northeast along a road leading to Growler Canyon, 4 1/2 feet north of the center line of the road, 2 feet south of the witness post, and about level with the road, and set in a concrete post projecting 0.3 foot.

DESCRIPTION OF BENCH MARK

Designation A 110
Nearest town Lukeville
State Arizona
County Pima
Distance and direction from nearest town 23.7 miles northwest
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.95 miles north along the Sonoyta-Ajo Highway from the post office and store at Lukeville, thence 14.05 miles west along a road leading to Quitovaquito to a "Y" junction, thence 0.45 miles north along a road leading north to Bates Well and Ajo to a "Y" junction, thence 7.7 miles northeast along a road leading to Dripping Springs, thence 0.55 mile north along a road leading to Growler Canyon, 83 1/2 feet northwest across the road from the west bank of a large wash, 60 1/2 feet northwest of the center line of the road, 1.5 feet south of the witness post, and about 3/4 foot higher than the road, and set in a concrete post projecting 0.2 foot.

VERTICAL CONTROL DATA

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

by the
Coast and Geodetic Survey
SCALE: LEVEL DATUM OF 1929

DESCRIPTION OF BENCH MARK

Designation U 308 State Arizona County Pima
Nearest town Lukeville
Distance and direction from nearest town 23.15 miles northwest
Character of mark Sheet Brass Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.95 miles north along the Sonoyta-Ajo Highway from the post office and store at Lukeville, thence 14.05 miles west along a road leading to Quitoviquito to a "w" junction, thence 0.45 miles north along a road leading north to Bates Well and Ajo to a "w" junction, thence 7.7 miles northeast along a road leading to Dripping Springs, at the junction of a track road leading north thru Growler Canyon and northeast to Dripping Springs, line turns north along a road thru Growler Canyon, 47 feet northwest of the center line of the road leading to Dripping Springs, 32 feet east of the center line of the road leading north thru Growler Canyon, 2 feet west of the witness post, and about level with the road, and set in a concrete post projecting 0.4 foot.

DESCRIPTION OF BENCH MARK

Designation T 308 State Arizona County Pima
Nearest town Lukeville
Distance and direction from nearest town 22.65 miles northwest
Character of mark Sheet Brass Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.95 miles north along the Sonoyta-Ajo Highway from the post office and store at Lukeville, thence 14.05 miles west along a road leading north to Bates Well and Ajo to a "w" junction, thence 0.45 miles north along a road leading north to Bates Well and Ajo to a "w" junction, thence 7.2 miles northeast along a road leading to Dripping Springs, 156 feet southeast of the center of a road and wash crossing the road, 36 1/2 feet northeast of the center line of the road, 1.9 feet west of the witness post, and about 2 feet higher than the road, and set in a concrete post projecting 0.4 foot.

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

RECOVERY NOTE, BENCH MARK

Designation 1837.7 (USGLO)
Nearest town Ajo
Distance and direction from nearest town 12.8 miles southeast
Character of mark Standard cap
Established by USGLO
Present condition NOT RECOVERED
Detailed report

12.8 miles southeast of Ajo, Pima County. This bench mark may be reached from Tucson, Cornelia & Gila Bend Railroad station by going 0.2 mile southeast along the track, thence 12.6 miles southeast along State Highway 86, at the western boundary of the Papago Indian Reservation 82 feet north of the centerline of the highway, and in the fence line. A United States General Land Office standard cap, stamped "S 1 S 6 S 31 S 36 T 13S T 14S R4 W PR" and riveted on the top of a 3-inch iron pipe projecting 8 inches above ground.

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
Form 685A

RECOVERY NOTE, BENCH MARK

Designation V 36 State Arizona County Pima
Nearest town Ajo
Distance and direction from nearest town 13.7 miles southeast
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Present condition Good
Detailed description 0.15 mile southeast along the Tucson-Cornelia & Gila Bend Railroad from the station at Ajo to Highway 86, thence 13.55 miles southeast along State Highway 86, 0.9 mile southeast of the west boundary of the Papago Indian Reservation fence, 1952 feet northwest of the center of the highway and a dip, 40 feet southwest of the center line of Highway 86, 1.8 feet north of the witness post, and about 1 foot higher than the highway, and set in a concrete post projecting 0.9 foot above the ground.

DESCRIPTION OF BENCH MARK

Designation L 309 State Arizona County Pima
Nearest town Ajo
Distance and direction from nearest town 14.7 miles southeast
Character of mark Sheet Brass Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.15 miles southeast along the Tucson, Cornelia & Gila Bend Railroad from the station at Ajo, to Highway 86, thence 14.55 miles southeast along Highway 86, 1 mile northwest of the "w" junction of the Gunsight Road leading southeast & south, 103 1/2 feet southwest of the center of a small wash, 60 feet northeast of the center line of the Highway 86, 2 feet south of the witness post, and about 1 1/2 feet higher than the highway, and set in a concrete post projecting 0.4 foot.

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
Form 685A

RECOVERY NOTE, BENCH MARK

Designation W 36 State Arizona County Pima
Nearest town Ajo
Distance and direction from nearest town 15.7 miles southeast
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Present condition Good
Detailed report 0.15 miles southeast along the Tucson, Cornelia & Gila Bend Railroad from the station at Ajo, to Highway 86, thence 15.55 miles southeast along Highway 86, at the "w" junction of Highway 86 and Gunsight Road leading southeast & south, 36 1/2 feet south of the center line of Highway 86, 11 1/2 feet southwest of the center line of Gunsight Road, 2.2 feet north of the witness post, and about 1 1/2 feet higher than the road, and set in a concrete post projecting 1 foot.

R

DESCRIPTION OF BENCH MARK

Designation L 110 State Arizona County Pima
Nearest town Ajo-Tucson Hy.
Distance and direction from nearest town 1 mile south
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description This mark was not found, the road described that this mark was on can not be found, a new road has been constructed.

ORIGINAL DESCRIPTION

About 1.0 mi S of the Ajo-Tucson Highway, along the road to Escondido, About 5.4 mi E & N of Walls Well, 0.5 mi S of a wash, at the S end of a curve and a levee, 58 ft NW of the centerline of the road, and 40 ft S of the ditch. A concrete post.

JANUARY 1963

VERTICAL CONTROL DATA

PAGE NO. 21

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

by the
Coast and Geodetic Survey
SEA LEVEL DATUM OF 1929

QUAD 321123
ARIZ.
LATITUDE 32°00' to 32°30'
LONGITUDE 112°30' to 113°00'
DIAGRAM NT 12-10 AJO

Line 105 Line 106

DESCRIPTION OF BENCH MARK

Designation M 309
Nearest town Ajo
Distance and direction from nearest town 16.5 miles southeast
Character of mark Sheet Brass Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.15 miles southeast along the Tucson, Cornelia & Gila Bend Railroad from the station at Ajo to Highway 86, thence 16.35 miles southeast along Highway 86 to an intersection of road north and south to Kermoo, at a point where the road crosses a wash and at the intersection of Highway 86 and a road leading north and south to Kermoo, 297 feet south of the center line of Highway 86, 54 feet west of the center line of the road leading south to Kermoo, 2.1 feet east of the witness post, and about level with the road, and set in a concrete post projecting 0.3 foot.

Stamping M 309 1952

FORM 6854
(1-8-58)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

RECOVERY NOTE, BENCH MARK

Designation A 37
Nearest town Ajo
Distance and direction from nearest town 23.6 miles southeast
Character of mark Standard disk
Established by USCGS
Present condition GOOD
Detailed report

R

FORM 6854
(1-8-58)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

RECOVERY NOTE, BENCH MARK

Designation X 36
Nearest town Ajo
Distance and direction from nearest town 17.6 miles southeast
Character of mark Standard disk
Established by USCGS
Present condition GOOD
Detailed report

R

FORM 6854
(1-8-58)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

RECOVERY NOTE, BENCH MARK

Designation B 37
Nearest town Ajo
Distance and direction from nearest town 25.4 miles southeast
Character of mark Standard disk
Established by USCGS
Present condition GOOD
Detailed report

R

17.6 miles southeast along State Highway 86 from the Tucson, Cornelia & Gila Bend Railroad station at Ajo, Pima County, on the old Ajo-Tucson highway, 0.4 mile east of a small concrete bridge with an iron railing, and 36 feet south of the centerline of the highway. A standard disk, stamped "2035.754 X 36 1933" and set in the top of a concrete post projecting 1 foot above ground.

FORM 6854
(1-8-58)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

RECOVERY NOTE, BENCH MARK

Designation Y 36
Nearest town Ajo
Distance and direction from nearest town 19.7 miles southeast
Character of mark Standard disk
Established by USCGS
Present condition Destroyed
Detailed report

R

25.4 miles southeast along State Highway 86 from the Tucson, Cornelia & Gila Bend Railroad station at Ajo, Pima County, on the old Ajo-Tucson highway, 0.5 mile east of a dark lava hill with a prominent bald knob, 180 feet west of the first dip in the highway east of the hill, 42 feet south of the centerline of the highway, in a shallow borrow pit, in the top of a lime-cemented conglomerate outcrop, and flush with the ground. A standard disk, stamped "2126.128 B 37 1933."

LINE 106

Disk returned to this Office by Level Party 616.

FORM 6854
(1-8-58)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

RECOVERY NOTE, BENCH MARK

Designation Z 36
Nearest town Ajo
Distance and direction from nearest town 21.7 miles southeast
Character of mark Standard disk
Established by USCGS
Present condition GOOD
Detailed report

R

DESCRIPTION OF BENCH MARK

Designation A 338
Nearest town Ajo
Distance and direction from nearest town 22.65 miles southeast
Character of mark A CGGS Bench Mark Disk on a copper/brass rod
Established by CGGS
Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo, thence 10.8 miles southeast along State Highway 85, thence 5.75 miles southeast along State Highway 86, thence 0.15 miles southeast along a graded dirt road, 1.0 mile south-east of the junction of the road and a trail road leading south to Wells Well, 50 feet west of the center line of the road, 56 feet northwest of a telephone pole, 1.3 feet west of a metal witness post, about 1 foot below the level of the road, a disk on a 5/8-inch copper coated rod that is driven to a depth of 9/8 feet and is encased in a 6-inch tile which projects 3 inches.

21.7 miles southeast along State Highway 86 from the Tucson, Cornelia & Gila Bend Railroad station at Ajo, Pima County, on the old Ajo-Tucson highway, 0.2 mile east of the junction of a road leading to Indian Oasis, 180 feet west of a dip in the highway with masses of broken concrete nearby, and 58 feet north of the centerline of the highway. A standard disk, stamped "2150.019 Z 36 1933" and set in the top of a concrete post projecting 1 foot above ground.

VERTICAL CONTROL DATA

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

by the
Coast and Geodetic Survey
SEA-LEVEL DATUM OF 1929

QUAD 321123

ARIZ.
LATITUDE 32°00' to 32°30'
LONGITUDE 112°30' to 113°00'
DIAGRAM NI 12-10 AJO

DESCRIPTION OF BENCH MARK

Designation **B 338** State **Arizona** County **Pima**
Nearest town **Ajo** Chief of party **D. Moncevicz**
Distance and direction from nearest town **23.45 miles southeast** Levelling date **November 1961**
Character of mark **A C&GS Bench Mark Disk** Stamping **B 338 1961**
Established by **C&GS**

Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 10.8 miles southeast along State Highway 85; thence 5.55 miles southeast along State Highway 86; thence 6.95 miles southeast along a graded dirt road, set in the top of a boulder which projects 14 inches, 25 feet east of the center line of the road, and about level with the road.

DESCRIPTION OF BENCH MARK

Designation **C 338** State **Arizona** County **Pima**
Nearest town **Ajo** Chief of party **D. Moncevicz**
Distance and direction from nearest town **24.55 miles southeast** Levelling date **November 1961**
Character of mark **A C&GS Bench Mark Disk** Stamping **C 338 1961**
Established by **C&GS**

Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 10.8 miles southeast along State Highway 85; thence 5.55 miles southeast along State Highway 86; thence 8.05 miles southeast along a graded dirt road, 56 feet west of the center line of the road, 130 feet north of the north bank of a sandy wash, 194 feet west and across the road from a telephone pole, 1.3 feet west of a metal witness post, about level with the road, and set in the top of a concrete post projecting 4 inches.

DESCRIPTION OF BENCH MARK

Designation **D 338** State **Arizona** County **Pima**
Nearest town **Ajo** Chief of party **D. Moncevicz**
Distance and direction from nearest town **25.55 miles southeast** Levelling date **November 1961**
Character of mark **A C&GS Bench Mark Disk** Stamping **D 338 1961**
Established by **C&GS**

Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 10.8 miles southeast along State Highway 85; thence 5.55 miles southeast along State Highway 86; thence 9.05 miles southeast along a graded dirt road; 69 feet north-east of the center line of the road, 134 feet southeast of a telephone pole, 1.4 feet northeast of a metal witness post, about level with the road, and set in the top of a concrete post projecting 7 inches.

DESCRIPTION OF BENCH MARK

Designation **E 338** State **Arizona** County **Pima**
Nearest town **Ajo** Chief of party **D. Moncevicz**
Distance and direction from nearest town **26.6 miles southeast** Levelling date **November 1961**
Character of mark **A C&GS Bench Mark Disk** Stamping **E 338 1961**
Established by **C&GS**

Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 10.8 miles southeast along State Highway 85; thence 5.55 miles southeast along State Highway 86; thence 10.1 miles southeast along a graded dirt road; 0.1 mile north-west of a wash, 70 feet northeast of the center line of the road, 94 feet southeast of a telephone pole, 1.5 feet northeast of a metal witness post, about level with the road, and set in the top of a concrete post projecting 5 inches.

DESCRIPTION OF BENCH MARK

Designation **F 338** State **Arizona** County **Pima**
Nearest town **Ajo** Chief of party **D. Moncevicz**
Distance and direction from nearest town **27.6 miles southeast** Levelling date **November 1961**
Character of mark **A C&GS Bench Mark Disk** Stamping **F 338 1961**
Established by **C&GS**

Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 10.8 miles southeast along State Highway 85; thence 5.55 miles southeast along State Highway 86; thence 11.1 miles southeast along a graded dirt road, 73 feet north-east of the center line of the road, 12 feet southeast of a telephone pole, 1.3 feet northeast of a metal witness post, about level with the road, and set in the top of a concrete post.

DESCRIPTION OF BENCH MARK

Designation **G 338** State **Arizona** County **Pima**
Nearest town **Ajo** Chief of party **D. Moncevicz**
Distance and direction from nearest town **28.6 miles southeast** Levelling date **November 1961**
Character of mark **A C&GS Bench Mark Disk on a Copper/** Stamping **G 338 1961**
Established by **C&GS**

Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 10.8 miles southeast along State Highway 85; thence 5.55 miles southeast along State Highway 86; thence 12.2 miles southeast along a graded dirt road; 1.8 miles northwest of the school at Gu Vo, an Indian village, 71 feet northeast of the center line of the road, 62 feet southeast of a telephone pole, 1.6 feet east of a metal witness post, about 1 foot below the level of the road, and on the top of a 5/8-inch copper coated rod that is driven to a depth of 12 feet and is encased in a 6-inch tile which projects 2 inches.

DESCRIPTION OF BENCH MARK

Designation **H 338** State **Arizona** County **Pima**
Nearest town **Ajo** Chief of party **D. Moncevicz**
Distance and direction from nearest town **29.3 miles southeast** Levelling date **November 1961**
Character of mark **A C&GS Bench Mark Disk** Stamping **H 338 1961**
Established by **C&GS**

Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 10.8 miles southeast along State Highway 85; thence 5.55 miles southeast along State Highway 86; thence 12.8 miles southeast along a graded dirt road; or 19.6 miles north along a graded dirt road from the water tank and windmill at Menagers, an Indian village, 1.2 miles west of the school at Gu Vo, an Indian village, set in the top of the north edge of a rock outcrop which projects 3 feet above the level of the ground, 0.1 mile south of the road, and 240 feet south of a telephone pole.

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

Coast and Geodetic Survey
SEA-LEVEL DATUM OF 1929

QUAD 321123
ARIZ.
LATITUDE 32°00' to 32°30'
LONGITUDE 112°30' to 113°00'
ADJ
DIAGRAM NI 12-10

DESCRIPTION OF BENCH MARK

Designation J 338
State Arizona
County Pima
Nearest town Menaguers
Distance and direction from nearest town 18.6 miles north
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Detailed description About 18.6 miles north along a graded dirt road from the water tank and windmill at Menaguers, an Indian village; or about 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 10.8 miles southeast along State Highway 85; thence 5.55 miles southeast along State Highway 86; thence 13.8 miles southeast along a graded dirt road; 0.2 mile northeast of the school at Gu Vo, an Indian village; 80 feet east of the center line of the graded dirt road, 102 feet southeast of the southeast corner of the triangular junction of the graded dirt road and a road leading west, 1.4 feet east of a metal witness post, about level with the road, and set in the top of a concrete post projecting 6 inches.

DESCRIPTION OF BENCH MARK

Designation N 338
State Arizona
County Pima
Nearest town Menaguers
Distance and direction from nearest town 14.8 miles north
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Detailed description About 14.8 miles north along a graded dirt road from the water tank and windmill at Menaguers, an Indian village; 3.7 miles south of the school at Gu Vo, 102 feet west of the center line of the road, 31 feet south of a telephone pole, 1.9 feet west of a metal witness post, about level with the road, and set in the top of a concrete post projecting 6 inches.

Designation K 338
State Arizona
County Pima
Nearest town Menaguers
Distance and direction from nearest town 17.8 miles north
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Detailed description About 17.8 miles north along a graded dirt road from the water tank and windmill at Menaguers, an Indian village; 0.6 mile south of the school at Gu Vo, an Indian village, set in the top of a boulder which projects 2 feet, at the bottom of the east slope of a rocky hill, 132 feet west of the center line of the road, 53 feet south of a telephone pole braced with a guy wire, and about 8 feet above the level of the road.

DESCRIPTION OF BENCH MARK

Designation P 338
State Arizona
County Pima
Nearest town Menaguers
Distance and direction from nearest town 13.75 miles north
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Detailed description About 13.75 miles north along a graded dirt road from the water tank and windmill at Menaguers, an Indian village; 4.75 miles south of the school at Gu Vo, set in the top of a black boulder which projects 16 inches, 166 feet west of the center line of the road, 84 feet south-west of a telephone pole, 64 feet west of a telephone line, 14.0 feet north of a metal witness post, and about level with the road.

DESCRIPTION OF BENCH MARK

Designation P 338
State Arizona
County Pima
Nearest town Menaguers
Distance and direction from nearest town 13.75 miles north
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Detailed description About 13.75 miles north along a graded dirt road from the water tank and windmill at Menaguers, an Indian village; 4.75 miles south of the school at Gu Vo, set in the top of a black boulder which projects 16 inches, 166 feet west of the center line of the road, 84 feet south-west of a telephone pole, 64 feet west of a telephone line, 14.0 feet north of a metal witness post, and about level with the road.

LINE 107

DESCRIPTION OF BENCH MARK

Designation L 338
State Arizona
County Pima
Nearest town Menaguers
Distance and direction from nearest town 16.75 miles north
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Detailed description About 16.75 miles north along a graded dirt road from the water tank and windmill at Menaguers, an Indian village; 1.7 miles south of the school at Gu Vo, 94 feet west of the center line of the road, 14 feet east of a telephone pole, 1.4 feet west of a metal witness post, about level with the road, and set in the top of a concrete post projecting 6 inches.

DESCRIPTION OF BENCH MARK

Designation A 336
State Arizona
County Pima
Nearest town Ajo
Distance and direction from nearest town 2.3 miles east
Character of mark A C&GS Bench Mark Disk on a copper/cod
Established by C&GS
Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 1.4 miles southeast along State Highway 85; thence 0.8 mile east along a dirt road which follows a pipe line, 0.4 mile west of a steel framed gate across the road, 51 feet north of the center line of the road, 1.5 feet west of a metal witness post, about level with the road, a disk on the top of a copper coated rod that is driven to a depth of 16 feet and is encased in a 6-inch tile which projects 2 inches.

DESCRIPTION OF BENCH MARK

Designation M 338
State Arizona
County Pima
Nearest town Menaguers
Distance and direction from nearest town 15.8 miles north
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Detailed description About 15.8 miles north along a graded dirt road from the water tank and windmill at Menaguers, an Indian village; 2.7 miles south of the school at Gu Vo, 104 feet west of the center line of the road, 55 feet south of a telephone pole, 1.5 feet west of a metal witness post, about level with the road, and set in the top of a concrete post projecting 7 inches.

DESCRIPTION OF BENCH MARK

Designation E 336
State Arizona
County Pima
Nearest town Ajo
Distance and direction from nearest town 3.35 miles east
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 1.4 miles southeast along State Highway 85; thence 1.8 miles east along a dirt road which follows a pipe line, 0.6 mile east of a steel framed gate across the road, 76 feet north of the center line of the road, 1.3 feet north of a metal witness post, about level with the road, and set in the top of a concrete post projecting 1 inch.

VERTICAL CONTROL DATA

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

by the
Coast and Geodetic Survey
SEA LEVEL DATUM OF 1929

QUAD 321123
ARIZ.
LATITUDE 32°00' to 32°30'
LONGITUDE 112°30' to 113°00'
DIAGRAM NI 12-10 AJO

PAGE NO. 24

DESCRIPTION OF BENCH MARK

Designation **C 336**
Nearest town **Ajo**
Distance and direction from nearest town **4.35 miles east**
Character of mark **A C&GS Bench Mark Disk**
Established by **C&GS**
County **Arizona**
State **Pima**
Chief of party **D. Moncevicz**
Leveling date **C 336 1961**
Stamping **C 336 1961**

Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 1.4 miles southeast along State Highway 85; thence 2.8 miles east along a dirt road which follows a pipe line; 1.6 miles east of a steel framed gate across the dirt road, about 100 yards northeast of the crossing of the road and a sandy wash, 104 feet northwest of the center line of the road, 1.3 feet northwest of a metal witness post, about level with the road, and set in the top of a concrete post projecting 4 inches.

DESCRIPTION OF BENCH MARK

Designation **D 336**
Nearest town **Ajo**
Distance and direction from nearest town **5.5 miles east**
Character of mark **A C&GS Bench Mark Disk**
Established by **C&GS**
County **Arizona**
State **Pima**
Chief of party **D. Moncevicz**
Leveling date **November 1961**
Stamping **D 336 1961**

Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 1.4 miles southeast along State Highway 85; thence 3.9 miles east along a dirt road which follows a pipe line; 2.75 miles east of a steel framed gate across the road, about 100 yards southeast of a sandy wash, 78 feet south of the center line of the road, 0.9 foot south of a metal witness post, about level with the road, and set in the top of a concrete post projecting 6 inches.

DESCRIPTION OF BENCH MARK

Designation **E 336**
Nearest town **Ajo**
Distance and direction from nearest town **6.5 miles east**
Character of mark **A C&GS Bench Mark Disk**
Established by **C&GS**
County **Arizona**
State **Pima**
Chief of party **D. Moncevicz**
Leveling date **November 1961**
Stamping **E 336 1961**

Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 1.4 miles southeast along State Highway 85; thence 4.95 miles east along a dirt road which follows a pipe line; 4.7 miles west of a metal windmill, 79 feet south of the center line of the road, 1.5 feet south of a metal witness post, about level with the road, and set in the top of a concrete post projecting 6 inches.

DESCRIPTION OF BENCH MARK

Designation **F 336**
Nearest town **Ajo**
Distance and direction from nearest town **7.5 miles east**
Character of mark **A C&GS Bench Mark Disk on a Copper/Coated Rod**
Established by **C&GS**
County **Arizona**
State **Pima**
Chief of party **D. Moncevicz**
Leveling date **November 1961**
Stamping **F 336 1961**

Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 1.4 miles southeast along State Highway 85; thence 5.95 miles east along a dirt road which follows a pipe line; 3.7 miles west of a metal windmill, 85 feet south of the center line of the road, 1.2 feet south of a metal witness post, about level with the road, on the top of a 5/8-inch copper coated rod that is driven to a depth of 11 feet and is encased in a 6-inch tile which projects 4 inches.

DESCRIPTION OF BENCH MARK

Designation **G 336**
Nearest town **Ajo**
Distance and direction from nearest town **8.5 miles east**
Character of mark **A C&GS Bench Mark Disk**
Established by **C&GS**
County **Arizona**
State **Pima**
Chief of party **D. Moncevicz**
Leveling date **November 1961**
Stamping **G 336 1961**

Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 1.4 miles southeast along State Highway 85; thence 6.95 miles east along a dirt road which follows a pipe line; 2.7 miles west of a metal windmill, 75 feet south of the center line of the road, 1.3 feet south of a metal witness post, about level with the road, and set in the top of a concrete post projecting 6 inches.

DESCRIPTION OF BENCH MARK

Designation **H 336**
Nearest town **Ajo**
Distance and direction from nearest town **9.5 miles east**
Character of mark **A C&GS Bench Mark Disk**
Established by **C&GS**
County **Arizona**
State **Pima**
Chief of party **D. Moncevicz**
Leveling date **November 1961**
Stamping **H 336 1961**

Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 1.4 miles southeast along State Highway 85; thence 7.95 miles east along a dirt road which follows a pipe line; 1.7 miles west of a metal windmill, 0.15 mile west of a junction of the dirt road and a trail road leading south, 64 feet south of the center line of the road, 1.4 feet south of a metal witness post, about 1 foot above the level of the road, and set in the top of a concrete post projecting 6 inches.

DESCRIPTION OF BENCH MARK

Designation **J 336**
Nearest town **Ajo**
Distance and direction from nearest town **10.45 miles east**
Character of mark **A C&GS Bench Mark Disk**
Established by **C&GS**
County **Arizona**
State **Pima**
Chief of party **D. Moncevicz**
Leveling date **November 1961**
Stamping **J 336 1961**

Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 1.4 miles southeast along State Highway 85; thence 8.9 miles east along a dirt road which follows a pipe line; 0.75 mile southwest of a metal windmill, 0.1 mile northeast of a wooden corral, 150 feet northeast of a junction of the dirt road and a dirt road leading south, set in the foot and on the northwest side of a solid rock hill, 30 feet southeast of the center line of the road, and about 1½ feet above the level of the road.

DESCRIPTION OF BENCH MARK

Designation **K 336**
Nearest town **Ajo**
Distance and direction from nearest town **11.45 miles east**
Character of mark **A C&GS Bench Mark Disk**
Established by **C&GS**
County **Arizona**
State **Pima**
Chief of party **D. Moncevicz**
Leveling date **November 1961**
Stamping **K 336 1961**

Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 1.4 miles southeast along State Highway 85; thence 9.9 miles east along a dirt road which follows a pipe line; 0.25 mile northeast of a metal windmill, set in the top of a large black boulder which projects 24 inches above the ground, 126 feet northwest of the center line of the road, 20 feet northeast of a tall, twin saguaro, 58.5 feet northwest of a metal witness post, and about level with the road.

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

by the
Coast and Geodetic Survey
SEA-LEVEL DATUM OF 1929

QUAD 321123
ARIZ. LATITUDE 32°00' to 32°30'
LONGITUDE 112°30' to 113°00'
DIAGRAM NI 12-10 AJO

Line 107

DESCRIPTION OF BENCH MARK

Designation T 11 S (USGLOS) State Arizona County Pima
Nearest town Ajo Chief of party D. Moncevicz
Distance and direction from nearest town 12.45 miles east Leveling date November 1961
Character of mark A U. S. General Land Office Survey/ Cap Stamping T 11 S R 4 W S 36
Established by U. S. General Land Office Survey S 34 S 453 T 12 S
Detailed description About 0.15 mile southeast along the Tucson, Cornelia and
Gila Bend Railroad from the station at Ajo; thence 1.4 miles southeast
along State Highway 85; thence 10.9 miles east along a dirt road which
follows a pipe line; 1.25 miles northeast of a metal windmill, 0.1 mile
north of 2 valves on a pipe line, at the northwest corner of a fence
around the Papago Indian Reservation, 10 feet southeast of the center line
of the road, 1.4 feet northwest of a fence corner post, about 1 foot
above the level of the road, and on the top of an iron pipe projecting
14 inches.

DESCRIPTION OF BENCH MARK

Designation L 336 State Arizona County Pima
Nearest town Ajo Chief of party D. Moncevicz
Distance and direction from nearest town 13.45 miles east Leveling date November 1961
Character of mark A C&GS Bench Mark Disk on a copper/coin stamp L 336 1961
Established by C&GS
Detailed description About 0.15 mile southeast along the Tucson, Cornelia and
Gila Bend Railroad from the station at Ajo; thence 1.4 miles southeast
along State Highway 85; thence 11.9 miles east along a dirt road which
follows a pipe line; 2.25 miles northeast of a metal windmill, 55 feet
west of the center line of the road, 0.6 foot west of a metal witness
post, about level with the road, a disk on the top of a 5/8-inch copper
coated rod that is driven to a depth of 7 feet and is encased in a 6-inch
tile which projects 6 inches.

DESCRIPTION OF BENCH MARK

Designation M 336 State Arizona County Pima
Nearest town Ajo Chief of party D. Moncevicz
Distance and direction from nearest town 14.5 miles east Leveling date November 1961
Character of mark A C&GS Bench Mark Disk Stamping M 336 1961
Established by C&GS
Detailed description About 0.15 mile southeast along the Tucson, Cornelia and
Gila Bend Railroad from the station at Ajo; thence 1.4 miles southeast
along State Highway 85; thence 12.95 miles east along a dirt road which
follows a pipe line; 3.25 miles northeast of a metal windmill, in the top
of a black boulder which projects 10 inches, 195 feet northwest of the
center line of the road, 5.7 feet northwest of a metal witness post, and
about 2 feet above the level of the road.

DESCRIPTION OF BENCH MARK

Designation N 336 State Arizona County Pima
Nearest town Ajo Chief of party D. Moncevicz
Distance and direction from nearest town 15.55 miles east Leveling date November 1961
Character of mark A C&GS Bench Mark Disk Stamping N 336 1961
Established by C&GS
Detailed description About 0.15 mile southeast along the Tucson, Cornelia and
Gila Bend Railroad from the station at Ajo; thence 1.4 miles southeast
along State Highway 85; thence 14.0 miles east along a dirt road which
follows a pipe line; 4.25 miles northeast of a metal windmill, in the top
of a black boulder which projects 12 inches, 36 feet southeast of the
center line of the road, and about 4 feet above the level of the road.

DESCRIPTION OF BENCH MARK

Designation P 336 State Arizona County Pima
Nearest town Ajo Chief of party D. Moncevicz
Distance and direction from nearest town 16.45 miles east Leveling date November 1961
Character of mark A C&GS Bench Mark Disk Stamping P 336 1961
Established by C&GS
Detailed description About 0.15 mile southeast along the Tucson, Cornelia and
Gila Bend Railroad from the station at Ajo; thence 1.4 miles southeast
along State Highway 85; thence 14.9 miles east along a dirt road which
follows a pipe line; 5.25 miles northeast of a metal windmill, set
vertically in the northwest face of a very large boulder which projects
8 feet, 12+ feet southeast of the center line of the road, and about
6 feet above the level of the road.

DESCRIPTION OF BENCH MARK

Designation Q 336 State Arizona County Pima
Nearest town Ajo Chief of party D. Moncevicz
Distance and direction from nearest town 17.0 miles east Leveling date November 1961
Character of mark A C&GS Bench Mark Disk Stamping Q 336 1961
Established by C&GS
Detailed description About 0.15 mile southeast along the Tucson, Cornelia and
Gila Bend Railroad from the station at Ajo; thence 1.4 miles southeast
along State Highway 85; thence 15.45 miles east along a dirt road which
follows a pipe line; 5.8 miles northeast of a metal windmill, set in the
top of a rock on the north bank of a large draw, 22 feet west of the
center line of the road, 185 feet east of a pipe line, and about level
with the road.

DESCRIPTION OF BENCH MARK

Designation R 336 State Arizona County Pima
Nearest town Ajo Chief of party D. Moncevicz
Distance and direction from nearest town 18.0 miles east Leveling date November 1961
Character of mark A C&GS Bench Mark Disk Stamping R 336 1961
Established by C&GS
Detailed description About 0.15 mile southeast along the Tucson, Cornelia and
Gila Bend Railroad from the station at Ajo; thence 1.4 miles southeast
along State Highway 85; thence 16.45 miles east along a dirt road which
follows a pipe line; 3.1 miles southwest of a gate leading into the
Papago Indian Reservation; set in the top of a flat rock which is flush
with the ground, 19 feet southeast of the center line of the road, 8.3
feet northwest of a metal witness post, and about level with the road.

DESCRIPTION OF BENCH MARK

Designation S 336 State Arizona County Pima
Nearest town Ajo Chief of party D. Moncevicz
Distance and direction from nearest town 18.65 miles east Leveling date November 1961
Character of mark A C&GS Bench Mark Disk Stamping S 336 1961
Established by C&GS
Detailed description About 0.15 mile southeast along the Tucson, Cornelia and
Gila Bend Railroad from the station at Ajo; thence 1.4 miles southeast
along State Highway 85; thence 17.1 miles east along a dirt road which
follows a pipe line; 2.45 miles southwest of a gate entering the Papago
Indian Reservation; on the top of a hill and in a pass between two moun-
tains, set in the top of a black boulder which projects 1 foot, 117 feet
south of the center line of the road, 4.3 feet southeast of a metal witness
post, and about 2 feet above the level of the road.

VERTICAL CONTROL DATA

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

by the
Coast and Geodetic Survey
SEALEVEL DATUM OF 1929

QUAD 321123

ARIZ.
LATITUDE 32°00' to 32°30'
LONGITUDE 112°30' to 113°00'
DIAGRAM NI 12-10 AJO

DESCRIPTION OF BENCH MARK

Designation T 336
Nearest town Ajo
Distance and direction from nearest town 19.65 miles east
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 1.4 miles southeast along State Highway 85; thence 18.1 miles east along a dirt road which follows a pipe line; 1.45 miles west of a gate entering the Papago Indian Reservation; set in the top of a black rock outcrop which projects 30 inches, 26 feet east of the center line of the road, and about 4 feet above the level of the road.

Designation X 336
Nearest town Ajo
Distance and direction from nearest town 23.2 miles east
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 1.4 miles southeast along State Highway 85; thence 21.85 miles east along a dirt road which follows a pipe line; or about 6.5 miles northwest along a graded dirt road from the water tank at Ventana; thence 14.1 miles west along a dirt road which follows a pipe line; 49 feet south of the center line of the road, 1.4 feet southwest of the more easterly of 2 valves on the pipe line, 1.4 feet south of a metal witness post, about level with the road, and set in the top of a concrete post projecting 4 inches.

DESCRIPTION OF BENCH MARK

Designation U 336
Nearest town Ajo
Distance and direction from nearest town 20.65 miles east
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 1.4 miles southeast along State Highway 85; thence 19.3 miles east along a dirt road which follows a pipe line; 0.25 mile west of a gate entering the Papago Indian Reservation, set in the top of a black boulder which projects 1 foot, 35 feet south of the center line of the road, on the west slope of the east bank of a wash, and about 2 feet above the level of the road.

DESCRIPTION OF BENCH MARK

Designation 50 GWM (USGS)
Nearest town Ventana
Distance and direction from nearest town 19.75 miles west
Character of mark A US Geological Survey Disk
Established by US Geological Survey
Detailed description About 6.5 miles northwest along a graded dirt road from the water tank at Ventana; thence 13.25 miles west along a dirt road which follows a pipe line; or about 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 1.4 miles southeast along State Highway 85; thence 22.7 miles east along a dirt road which follows a pipe line; 0.85 mile east of 2 valves on the pipe line, 0.3 mile east of a wash, 31.5 feet south of the center line of the road, 31 feet southwest of pipe line milepost number 60, 46 yards west of BM Y 336, and about level with the road.

DESCRIPTION OF BENCH MARK

Designation V 336
Nearest town Ajo
Distance and direction from nearest town 21.2 miles east
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 1.4 miles southeast along State Highway 85; thence 19.85 miles east along a dirt road which follows a pipe line; 0.3 mile east of a gate entering the Papago Indian Reservation; 0.15 mile east of pipe line milepost number 63, set in the top of a black boulder which projects 16 inches, 208 feet north of the center line of the road, 56.8 feet north of a metal witness post, and about 2 feet below the level of the road.

DESCRIPTION OF BENCH MARK

Designation Y 336
Nearest town Ventana
Distance and direction from nearest town 19.75 miles west
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Detailed description About 6.5 miles northwest along a graded dirt road from the water tank at Ventana; thence 13.25 miles west along a dirt road which follows a pipe line; or about 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 1.4 miles southeast along State Highway 85; thence 22.7 miles east along a dirt road which follows a pipe line; 0.85 mile east of 2 valves on the pipe line, 0.3 mile east of a wash, 41 feet south of the center line of the road, 125 feet southeast of pipe line milepost number 60, 1.4 feet south of a metal witness post, about level with the road, and set in the top of a concrete post projecting 5 inches.

DESCRIPTION OF BENCH MARK

Designation W 336
Nearest town Ajo
Distance and direction from nearest town 22.05 miles east
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Detailed description About 0.15 mile southeast along the Tucson, Cornelia and Gila Bend Railroad from the station at Ajo; thence 1.4 miles southeast along State Highway 85; thence 20.7 miles east along a dirt road which follows a pipe line; 1.25 miles east of a gate entering the Papago Indian Reservation, 1.15 miles west of 2 valves on a pipe line, set in the top of a black boulder which projects 6 inches, 170 feet northwest and across the road from pipe line milepost number 62, 77 feet north of the center of the road, 5.2 feet north of a metal witness post, and about 2 feet below the level of the road.

DESCRIPTION OF BENCH MARK

Designation Z 336
Nearest town Ventana
Distance and direction from nearest town 18.75 miles west
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Detailed description About 6.5 miles northwest along a graded dirt road from the water tank at Ventana; thence 12.25 miles west along a dirt road which follows a pipe line; 0.3 mile west of a junction of the dirt road and a dirt road leading northwest, 43 feet south of the center line of the road, 182 feet east of pipe line milepost number 59, 1.5 feet south of a metal witness post, about level with the road, and set in the top of a concrete post projecting 5 inches.

FEBRUARY 1963

VERTICAL CONTROL DATA

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

by the
Coast and Geodetic Survey
SEA LEVEL DATUM OF 1929

QUAD. 321122
ARIZ. 32°00' to 32°30'
LATITUDE 112°00' to 112°50'
LONGITUDE NI 12-10 AJO
DIAGRAM

LINE 101 (Second-order)

The field work (L-945) was done in November 1933 by a party supervised by G.R. Fish. Check leveling (L-18612) was done in the vicinity of Pozo Blanco in October 1961 by a party supervised by M.H. Schilly.

The elevations for the 1933 leveling are based on a supplementary adjustment of 1958. The elevations for the 1961 check leveling are based on a supplementary adjustment of 1962.

Bench Mark Adjusted Elevation (Meters)

C 37 628.518 2062.063
D 37 608.179 1995.334
E 37 Destroyed
F 37 Destroyed
G 37 Destroyed

H 37 621.858 2040.212
I 37 656.381 2153.477
J 37 701.696 2302.148
K 37 674.462 2212.797
L 37 691.612 2269.064
M 37
N 37
P 37

ERS 1 2271.4
L 37 749.068 2457.567
M 37 815.362 2675.067
N 37 812.496 2665.664
P 37 767.447 2517.866
R 37 730.813 2397.676
S 37 689.148 2260.380
T 37 652.899 2142.053
Y 37 670.638 2200.251

LINE 102 (Second-order)

The field work (L-18609) was done in November 1961 by a party supervised by M.H. Schilly.

These elevations are based on a supplementary adjustment of 1962.

Bench Mark Adjusted Elevation (Meters)

R 47 714.734 2344.923
I 37 723.472 2373.591
M 37 747.440 2452.226

LINE 102 (Continued)

Bench Mark Adjusted Elevation (Meters)

14 WF (USGS) 798.706 2620.421
L 337 766.564 2514.969
15 WF (USGS) 753.625 2472.518
K 337 742.190 2435.002
16 WF (USGS) 720.386 2365.435

J 337 706.247 2317.079
17 WF (USGS) 698.456 2291.518

THE LINE LEAVES AND RE-ENTERS THE QUADRANGLE

E 337 686.760 2253.145
D 337 685.194 2248.007
C 337 676.934 2220.908
B 337 666.553 2186.849
A 337 668.928 2194.641

LINE 103 (Second-order)

The field work (L-5899) was done in 1935 by a party supervised by G.R. Fish. Check leveling (L-14475) was done in the vicinity of Santa Rosa in February 1952 by a party supervised by J.R. Flaegmiller.

These elevations are based on a supplementary adjustment of 1958.

Bench Mark Adjusted Elevation (Meters)

W 84 506.257 1660.945
X 84 515.735 1692.041
Y 84 529.470 1737.103
Z 84 542.960 1781.361
A 85 AZL 556.034 1824.255

A 85 560.080 1838.529
A 85 RM 1 560.223 1837.926
A 85 RM 2 560.092 1837.566
R 310 553.184 1814.904
B 85 548.953 1801.023

SANTA 549.611 1803.182
SANTA RM 1 549.539 1802.946
SANTA RM 2 549.763 1803.681
Q 310 557.216 1828.133
C 85 570.012 1870.114

LINE 103 (Continued)

Bench Mark Adjusted Elevation (Meters)

D 85 Destroyed
E 85 624.074 2047.483
F 85 655.472 2150.494
G 85 704.977 2312.912
H 85 745.998 2447.495

LINE 104 (Second-order)

The field work (L-18612) was done in October 1961 by a party supervised by M.H. Schilly.

These elevations are based on a supplementary adjustment of 1962.

Bench Mark Adjusted Elevation (Meters)

Q 337 684.458 2245.593
R 337 681.818 2236.931
S 337 662.270 2172.797
T 337 647.530 2124.438
U 337 635.419 2084.704
V 337 622.179 2041.266
W 337 614.972 2017.621
X 337 606.345 1989.317
Y 337 599.194 1965.856
Z 337 589.556 1934.235

B 339 578.068 1896.545
PISINEMO RM 1 577.647 1895.164
PISINEMO 1935 577.598 1895.003
PISINEMO RM 3 579.578 1901.499
A 339 574.743 1885.636
C 339 571.247 1874.166

LINE 105 (Second-order)

The field work (L-14475) was done in February 1952 by a party supervised by J.R. Flaegmiller.

These elevations are based on a supplementary adjustment of 1958.

Bench Mark Adjusted Elevation (Meters)

A 311 542.479 1779.783
J 91 542.740 1780.639

LINE 105 (Continued)

Bench Mark Adjusted Elevation (Meters)

Z 310 545.461 1789.567
S 310 573.947 1883.024
A 90 576.066 1889.977
T 310 588.392 1930.416
B 90 597.083 1958.930

U 310 608.138 1995.199
C 90 619.714 2033.178
V 310 633.560 2078.605
D 90 638.706 2095.488
W 310 646.646 2121.538

E 90 659.328 2163.145
X 310 671.482 2203.021
F 90 681.522 2235.960
L 311 697.158 2287.259
G 90 707.311 2320.569

M 311 719.827 2361.632
M 311 RM (USGS) 719.106 2359.287
H 90 702.742 2305.579
N 311 688.722 2259.582
N 311 RM (USGS) 688.832 2259.943
J 90 680.995 2224.221
P 311 679.002 2227.932
K 90 671.587 2203.365

LINE 106 (Second-order)

The field work (L-14475) was done in February 1952 by a party supervised by J.R. Flaegmiller.

These elevations are based on a supplementary adjustment of 1958.

Bench Mark Adjusted Elevation (Meters)

1974.2 (USGS) 601.724 1974.156
M 91 RM (USGS) 624.465 2048.766
M 91 629.443 2065.098

L 91 661.754 2171.105
2242.6 (USGS) 684.442 2245.540
K 91 705.859 2315.806

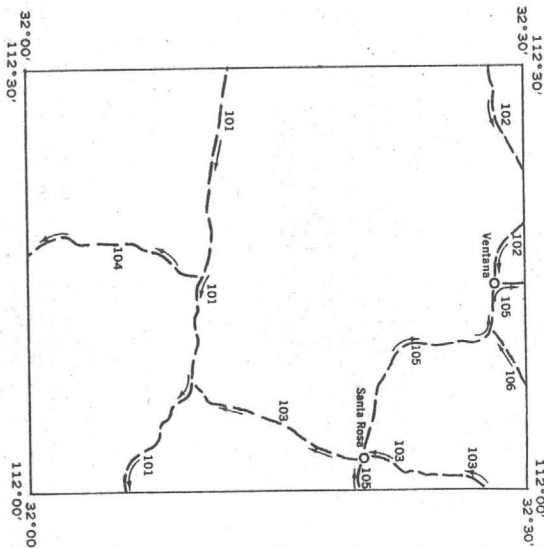
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COAST AND GEODETIC SURVEY
WASHINGTON D.C.

VERTICAL CONTROL DATA

by the
Coast and Geodetic Survey
SEA LEVEL DATUM OF 1929

QUAD. 321122
ARIZ.
LATITUDE 32°00' to 32°30'
LONGITUDE 112°00' to 112°30'
DIAGRAM NI 12-10 AJO

112°00' 321122
112°30' 32°00'



29.6 miles east along State Highway 86 from the Tucson, Cornelia & Gila Bend Railroad station at Ajo, Pima County, on the old Ajo-Tucson highway. 0.1 mile east of a dip in the highway, and 52 feet north of the centerline of the highway. A standard disk, stamped "1995.547 D 37 1933" and set in the top of a concrete post projecting 1 foot above ground.

FORM 685A
(1-8-58)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
RECOVERY NOTE, BENCH MARK

Designation D 37
Nearest town Ajo
Distance and direction from nearest town 29.6 miles east
Character of mark Standard disk
Established by USCG&S
Present condition GOOD
Detailed report

R

FORM 685A
(1-8-58)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
RECOVERY NOTE, BENCH MARK

Designation E 37
Nearest town Ajo
Distance and direction from nearest town 31.5 miles east
Character of mark Standard disk
Established by USCG&S
Present condition DESTROYED
Detailed report Disk received in office 15 May 1958.

R

FORM 685A
(1-8-58)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
RECOVERY NOTE, BENCH MARK

Designation F 37 1933
Nearest town
Distance and direction from nearest town
Character of mark
Established by
Present condition Destroyed
Detailed report

R

FORM 685A
(1-8-58)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
RECOVERY NOTE, BENCH MARK

Designation C 37
Nearest town Ajo
Distance and direction from nearest town 27.6 miles east
Character of mark Standard disk
Established by USCG&S
Present condition GOOD
Detailed report

R

27.6 miles east along State Highway 86 from the Tucson, Cornelia & Gila Bend Railroad station at Ajo, Pima County, on the old Ajo-Tucson highway. 0.3 mile east of a dip in the highway, and 46 feet north of the centerline of the highway. A standard disk, stamped "2062.286 C 37 1933" and set in the top of a concrete post projecting 1 foot above ground.

FORM 685A
(1-8-58)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
RECOVERY NOTE, BENCH MARK

Designation G 37 1933
Nearest town
Distance and direction from nearest town
Character of mark
Established by
Present condition Destroyed
Detailed report

R

Disk returned to this Office by Level Party 616.

VERTICAL CONTROL DATA

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

by the
Coast and Geodetic Survey
SEA LEVEL DATUM OF 1929

FORM 685A
(1-8-58)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

RECOVERY NOTE, BENCH MARK

Designation H 37
Nearest town Blanco
Distance and direction from nearest town 5.3 miles west
Character of mark Standard disk
Established by USC&GS
Present condition GOOD
Detailed report

State Arizona
County Pima
Chief of Party
Recovery Date Oct. 1934
Stamping

R

5.3 miles west along State Highway 86 from Pozo Blanco, Pima County, on the old Ajo-Tucson highway, 0.3 mile west of a concrete-protected dip at the center of a curve, and 39 feet south of the centerline of the highway. A standard disk, stamped "2040.399 H 37 1933" and set in the top of a concrete post projecting 10 inches above ground.

Designation N 337
Nearest town Tracy
Distance and direction from nearest town 5.8 miles east
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Detailed description About 5.8 miles east along State Highway 86 from the highway department maintenance camp at Tracy, an Indian village; 0.4 mile east of the junction of State Highway 86 and a road leading south to west of the junction of State Highway 86 and a road leading south to Pisinimo, an Indian village, set in line with a row of telephone poles, 88 feet north of the center line of the highway, 67 feet east of a telephone pole, 1.9 feet north of a metal witness post, about level with the highway, and set in the top of a concrete post projecting 3 inches.

State Arizona
County Pima
Nearest town Tracy
Distance and direction from nearest town 5.8 miles east
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Detailed description About 5.8 miles east along State Highway 86 from the highway department maintenance camp at Tracy, an Indian village; 0.4 mile east of the junction of State Highway 86 and a road leading south to west of the junction of State Highway 86 and a road leading south to Pisinimo, an Indian village, set in line with a row of telephone poles, 88 feet north of the center line of the highway, 67 feet east of a telephone pole, 1.9 feet north of a metal witness post, about level with the highway, and set in the top of a concrete post projecting 3 inches.

County Pima
Chief of party D. Moncevicz
Leveling date October 1961
Stamping N 337 1961

Quijotoa-Vamori Area, Arizona
DESCRIPTION OF BENCH MARK

QUAD. 321122
ARIZ.
LATITUDE 32°00' to 32°30'
LONGITUDE 112°00' to 112°30'
DIAGRAM NI 12-10 AJO

FORM 685A
(1-8-58)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

RECOVERY NOTE, BENCH MARK

Designation J 37
Nearest town Tracy
Distance and direction from nearest town 5.0 miles east
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Present condition Good
Detailed report About 5.0 miles east along State Highway 86 from the highway department maintenance camp at Tracy, an Indian village; 1.6 miles west of the junction of State Highway 86 and a road leading south to Pisinimo, an Indian village; 0.4 mile west of the junction of State Highway 86 and a road leading north, 48 feet north of the center line of the highway, 368 feet south of a telephone pole, 0.9 foot north of a metal witness post, about 1 foot below the level of the highway, and set in the top of a concrete post projecting 1 foot.

State Arizona
County Pima
Chief of Party D. Moncevicz
Recovery Date October 1961
Stamping J 37 1933 2153.654

R

State Arizona
County Pima
Nearest town Tracy
Distance and direction from nearest town 6.6 miles east
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Detailed description About 6.6 miles east along State Highway 86 from the highway department maintenance camp at Tracy, an Indian village; 152 feet southwest of the center of the junction of State Highway 86 and a road leading south to Pisinimo, an Indian village; 119 feet south of the center line of the highway, 89 feet west of the center line of the road leading south, 47 feet south of a telephone pole, 1.5 feet west of a metal witness post, about level with the road, and set in the top of a concrete post projecting 6 inches.

County Pima
Chief of party D. Moncevicz
Leveling date October 1961
Stamping P 337 1961

Quijotoa-Vamori Area, Arizona
DESCRIPTION OF BENCH MARK

DESCRIPTION OF SUPPLEMENTARY ELEVATION POINT

Extra Foresight No. 1
Distance and direction from bench mark 152 feet northeast of B.M. P 337
Detailed description At the junction of the center lines of State Highway 86 and a road leading south to Pisinimo.

SP

FORM 685A
(1-8-58)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

RECOVERY NOTE, BENCH MARK

Designation K 37
Nearest town Tracy
Distance and direction from nearest town 7.0 miles east
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Present condition Good
Detailed report About 7.0 miles east along State Highway 86 from the highway department maintenance camp at Tracy, an Indian village; 0.4 mile east of the junction of State Highway 86 and a road leading south to Pisinimo, an Indian village; 54 feet south of the center line of the highway, 129 feet south and across the highway from a telephone pole, 0.8 foot south of a metal witness post, about level with the highway, and set in the top of a concrete post projecting 1 foot.

State Arizona
County Pima
Chief of Party D. Moncevicz
Recovery Date October 1961
Stamping K 37 1933 2302.315
BLANCO 1936

R

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

RECOVERY NOTE, BENCH MARK

Designation L 37
Nearest town Pozo Blanco
Distance and direction from nearest town 0.6 mile east
Character of mark Standard disk
Established by USC&GS
Present condition GOOD
Detailed report

State Arizona
County Pima
Chief of Party
Recovery Date Oct. 1934
Stamping

R

0.6 mile east along State Highway 86 from the church at Pozo Blanco, Pima County, on the old Ajo-Tucson highway, on the east side of a low rocky point extending down to the highway from the south, 81 feet south of the centerline of the highway, in the top of a silicified rhyolite outcrop, and 6 inches above the ground. A standard disk, stamped "2457.731 L 37 1933."

FEBRUARY 1963

VERTICAL CONTROL DATA

PAGE NO. 13

PUBLISHED AND PRINTED BY:
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COAST AND GEODETIC SURVEY
WASHINGTON D.C.

by the
Coast and Geodetic Survey
SEA LEVEL DATUM OF 1929

QUAD. 321122
ARIZ. 32°00' to 32°30'
LATITUDE 112°00' to 112°30'
LONGITUDE NI 12-10 AJO
DIAGRAM

FORM 6854
(1-6-56)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

RECOVERY NOTE, BENCH MARK

Designation M 37
Nearest town Sells
Distance and direction from nearest town 28.9 miles west
Character of mark Standard disk
Established by USC&GS
Present condition GOOD
Detailed report Battered, but legible.

R

28.9 miles west along State Highway 86 from the post office at Sells, Pima County, 2.6 miles east of the church at Pezo Blanco, on the old Ajo-Tucson highway, and 30 feet south of the centerline of the highway. A standard disk, stamped "2875.221 M 37 1933" and set in the top of a concrete post projecting 8 inches above ground.

FORM 6854
(1-6-56)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

RECOVERY NOTE, BENCH MARK

Designation N 37
Nearest town Sells
Distance and direction from nearest town 26.8 miles west
Character of mark Standard disk
Established by USC&GS
Present condition Disk is loose and bent slightly
Detailed report

R

26.8 miles west along State Highway 86 from the post office at Sells, Pima County, on the old Ajo-Tucson highway, 1.4 miles west of Savage's Store (in 1934), 350 feet west of a culvert at the north point of a rocky slope, 46 feet south of the centerline of the highway, in the top of a grey outcrop, and about 2 inches above the ground. A standard disk, stamped "2665.812 N 37 1933."

FORM 6854
(1-6-56)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

RECOVERY NOTE, BENCH MARK

Designation P 37
Nearest town Sells
Distance and direction from nearest town 24.8 miles northwest
Character of mark Standard disk
Established by USC&GS
Present condition GOOD
Detailed report

R

24.8 miles northwest along State Highway 86 from the post office at Sells, Pima County, on the old Ajo-Tucson highway, 0.5 mile east of Savage's Store (in 1934), 300 feet west of an Indian graveyard, opposite a small clearing on the north side of the highway, and 42 feet south of the centerline of the highway. A standard disk, stamped "2518.003 P 37 1933" and set in the top of a concrete post projecting 7 inches above ground.

FORM 6854
(1-6-56)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

RECOVERY NOTE, BENCH MARK

Designation R 37
Nearest town Sells
Distance and direction from nearest town 22.8 miles northwest
Character of mark Standard disk
Established by USC&GS
Present condition GOOD
Detailed report

P

22.8 miles northwest along State Highway 86 from the post office at Sells, Pima County, on the old Ajo-Tucson highway, 2.5 miles east of Savage's Store (in 1934), and 36 feet north of the centerline of the highway. A standard disk, stamped "2397.813 R 37 1933" and set in the top of a concrete post projecting 8 inches above ground.

FORM 6854
(1-6-56)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

RECOVERY NOTE, BENCH MARK

Designation S 37
Nearest town Sells
Distance and direction from nearest town 20.9 miles northwest
Character of mark Standard disk
Established by USC&GS
Present condition GOOD
Detailed report

R

20.9 miles northwest along State Highway 86 from the post office at Sells, Pima County, on the old Ajo-Tucson highway, in 4.4 miles east of Savage's Store (in 1934), at a long curve in the highway, and 39 feet south of the centerline of the highway. A standard disk, stamped "2261.118 S 37 1933" and set in the top of a concrete post projecting 10 inches above ground.

FORM 6854
(1-6-56)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

RECOVERY NOTE, BENCH MARK

Designation T 37
Nearest town Sells
Distance and direction from nearest town 18.9 miles northwest
Character of mark Standard disk
Established by USC&GS
Present condition GOOD
Detailed report

R

18.9 miles northwest along State Highway 86 from the post office at Sells, Pima County, on the old Ajo-Tucson highway, 6.4 miles east of Savage's Store (in 1934), 60 feet north of the centerline of the highway, and in line with a row of poles. A standard disk, stamped "2142.191 T 37 1933" and set in the top of a concrete post projecting 10 inches above ground.

Line 101

VERTICAL CONTROL DATA

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COAST AND GEODETIC SURVEY
WASHINGTON D.C.

by the
Coast and Geodetic Survey
SEA-LEVEL DATUM OF 1929

QUAD. 321122

ARIZ. 32°00' to 32°30'
LATITUDE 112°00' to 112°30'
LONGITUDE NI 12-10 AJ0
DIAGRAM

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

RECOVERY NOTE, BENCH MARK

Designation Y 37
Nearest town Sells
Distance and direction from nearest town 16.9 miles northwest
Character of mark Standard disk
Established by USC&GS
Present condition GOOD
Detailed report

State Arizona
County
Chief of Party
Stamping

County Pima
Chief of Party
Stamping

R

Designation M 337

Nearest town Ventana

Distance and direction from nearest town 15.5 miles west

Character of mark A C&GS Bench Mark Disk on a Copper/Coated Rod

Established by C&GS

Detailed description About 6.5 miles northwest along a graded dirt road from the water tank at Ventana; thence 9.0 miles west along a dirt road which follows a pipe line; 57 feet north of the center line of the road, 139 feet northeast of pipe line milepost number 56, 1.3 feet north of a metal witness post, about 2 feet above the level of the road, a disk on the top of a 5/8-inch copper coated rod that is driven to a depth of 9 1/2 feet and is encased in a 6-inch tile which projects 4 inches.

DESCRIPTION OF BENCH MARK

State Arizona

County Pima

Distance and direction from nearest town 15.5 miles west

Character of mark A C&GS Bench Mark Disk on a Copper/Coated Rod

Established by C&GS

Detailed description About 6.5 miles northwest along a graded dirt road from the water tank at Ventana; thence 9.0 miles west along a dirt road which follows a pipe line; 57 feet north of the center line of the road, 139 feet northeast of pipe line milepost number 56, 1.3 feet north of a metal witness post, about 2 feet above the level of the road, a disk on the top of a 5/8-inch copper coated rod that is driven to a depth of 9 1/2 feet and is encased in a 6-inch tile which projects 4 inches.

County Pima

Chief of party D. Moncevicz

Leveling date November 1961

Stamping M 337 1961

16.9 miles northwest along State Highway 86 from the post office at Sells, Pima County, on the old Ajo-Tucson highway, 8.4 miles east of Savage's Store (in 1934), 66 feet north of the centerline of the highway, and in line with a row of poles. A standard disk, stamped "2200.389 Y 37 1933" and set in the top of a concrete post projecting 10 inches above ground.

Designation 14 WF (USGS)

Nearest town Ventana

Distance and direction from nearest town 14.4 miles west

Character of mark A US Geological Survey Disk

Established by US Geological Survey

Detailed description About 6.5 miles northwest along a graded dirt road from the water tank at Ventana; thence 7.9 miles west along a dirt road which follows a pipe line; on the crest of a hill and in a pass between two mountains, 85 feet south of the center line of the road, 0.05 mile east of pipe line milepost number 55, 1.3 feet east of a metal witness post, about 4 feet below the level of the road, and set in the top of a concrete post projecting 10 inches.

State Arizona

County Pima

Distance and direction from nearest town 14.4 miles west

Character of mark A US Geological Survey Disk

Established by US Geological Survey

Detailed description About 6.5 miles northwest along a graded dirt road from the water tank at Ventana; thence 7.9 miles west along a dirt road which follows a pipe line; on the crest of a hill and in a pass between two mountains, 85 feet south of the center line of the road, 0.05 mile east of pipe line milepost number 55, 1.3 feet east of a metal witness post, about 4 feet below the level of the road, and set in the top of a concrete post projecting 10 inches.

County Pima

Chief of party D. Moncevicz

Leveling date November 1961

Stamping 14 WF 1948 2620

DESCRIPTION OF BENCH MARK

DESCRIPTION OF BENCH MARK

Designation R 47 (USGS)
Nearest town Ventana
Distance and direction from nearest town 17.8 miles west
Character of mark A US Geological Survey Disk
Established by US Geological Survey
Detailed description About 6.5 miles northwest along a graded dirt road from the water tank at Ventana; thence 11.3 miles west along a dirt road which follows a pipe line; thence 0.1 mile south across brushy land; 0.15 mile west and 0.1 mile south of pipe line milepost number 58, 0.55 mile east of a junction of the road and a road leading northeast, 1.8 feet west of a junction of the road and a road leading southeast, 1.8 feet west of a metal witness post, about level with the road, and set in the top of a concrete post projecting 8 inches.

State Arizona

County Pima

Distance and direction from nearest town 17.8 miles west

Character of mark A US Geological Survey Disk

Established by US Geological Survey

Detailed description About 6.5 miles northwest along a graded dirt road from the water tank at Ventana; thence 11.3 miles west along a dirt road which follows a pipe line; thence 0.1 mile south across brushy land; 0.15 mile west and 0.1 mile south of pipe line milepost number 58, 0.55 mile east of a junction of the road and a road leading northeast, 1.8 feet west of a junction of the road and a road leading southeast, 1.8 feet west of a metal witness post, about level with the road, and set in the top of a concrete post projecting 8 inches.

County Pima

Chief of party D. Moncevicz

Leveling date November 1961

Stamping R 47 1930

DESCRIPTION OF BENCH MARK

Designation L 337

Nearest town Ventana

Distance and direction from nearest town 13.45 miles west

Character of mark A C&GS Bench Mark Disk

Established by C&GS

Detailed description About 6.5 miles northwest along a graded dirt road from the water tank at Ventana; thence 6.95 miles west along a dirt road which follows a pipe line; 45 feet north of the center line of the road, 71 feet northeast and across the road from pipe line milepost number 54, 1.4 feet north of a metal witness post, about level with the road, and set in the top of a concrete post projecting 4 inches.

State Arizona

County Pima

Distance and direction from nearest town 13.45 miles west

Character of mark A C&GS Bench Mark Disk

Established by C&GS

Detailed description About 6.5 miles northwest along a graded dirt road from the water tank at Ventana; thence 6.95 miles west along a dirt road which follows a pipe line; 45 feet north of the center line of the road, 71 feet northeast and across the road from pipe line milepost number 54, 1.4 feet north of a metal witness post, about level with the road, and set in the top of a concrete post projecting 4 inches.

County Pima

Chief of party D. Moncevicz

Leveling date November 1961

Stamping L 337 1961

DESCRIPTION OF BENCH MARK

Designation 13 WF (USGS)
Nearest town Ventana
Distance and direction from nearest town 16.6 miles west
Character of mark A US Geological Survey Disk
Established by US Geological Survey
Detailed description About 6.5 miles northwest along a graded dirt road from the water tank at Ventana; thence 10.1 miles west along a dirt road which follows a pipe line; 0.45 mile northeast of a junction of the road and a road leading southwest, 0.3 mile northeast of a wash, 300 feet southwest of pipe line milepost number 57, 36 feet southeast of the center line of the road, 0.7 foot southeast of a metal witness post, about level with the road, and set in the top of a concrete post projecting 8 inches.

State Arizona

County Pima

Distance and direction from nearest town 16.6 miles west

Character of mark A US Geological Survey Disk

Established by US Geological Survey

Detailed description About 6.5 miles northwest along a graded dirt road from the water tank at Ventana; thence 10.1 miles west along a dirt road which follows a pipe line; 0.45 mile northeast of a junction of the road and a road leading southwest, 0.3 mile northeast of a wash, 300 feet southwest of pipe line milepost number 57, 36 feet southeast of the center line of the road, 0.7 foot southeast of a metal witness post, about level with the road, and set in the top of a concrete post projecting 8 inches.

County Pima

Chief of party D. Moncevicz

Leveling date November 1961

Stamping 13 WF 1948 2374

DESCRIPTION OF BENCH MARK

Designation 15 WF (USGS)

Nearest town Ventana

Distance and direction from nearest town 12.45 miles west

Character of mark A US Geological Survey Disk

Established by US Geological Survey

Detailed description About 6.5 miles northwest along a graded dirt road from the water tank at Ventana; thence 5.95 miles west along a dirt road which follows a pipe line; 25 feet south of the center line of the road, 10.5 feet southeast of pipe line milepost number 53, 1.3 feet south of a metal witness post, about level with the road, and set in the top of a concrete post projecting 6 inches.

State Arizona

County Pima

Distance and direction from nearest town 12.45 miles west

Character of mark A US Geological Survey Disk

Established by US Geological Survey

Detailed description About 6.5 miles northwest along a graded dirt road from the water tank at Ventana; thence 5.95 miles west along a dirt road which follows a pipe line; 25 feet south of the center line of the road, 10.5 feet southeast of pipe line milepost number 53, 1.3 feet south of a metal witness post, about level with the road, and set in the top of a concrete post projecting 6 inches.

County Pima

Chief of party D. Moncevicz

Leveling date November 1961

Stamping 15 WF 1948 2472

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

by the
Coast and Geodetic Survey
SEALEVEL DATUM OF 1929

QUAD. 321122
ARIZ. 32°00' to 32°30'
LATITUDE 112°00' to 112°30'
LONGITUDE N 12-10 ADO
DIAGRAM

DESCRIPTION OF BENCH MARK

Designation K 337
State Arizona
County Pima
Nearest town Ventana
Distance and direction from nearest town 11.45 miles west
Chief of party D. Moncevicz
Leveling date November 1961
Stamping K 337 1961

Established by C&GS
Detailed description About 6.5 miles northwest along a graded dirt road from the water tank at Ventana; thence 4.95 miles west along a dirt road which follows a pipe line, set in the top of a black boulder which projects 10 inches, 29 feet north of the center line of the road, 44 feet north and across the road from pipe line milepost number 52, and about level with the road.

DESCRIPTION OF BENCH MARK

Designation 16 WF (USGS)
State Arizona
County Pima
Nearest town Ventana
Distance and direction from nearest town 10.45 miles west
Chief of party D. Moncevicz
Leveling date November 1961
Stamping 16 WF 1948 2365

Established by US Geological Survey
Detailed description About 6.5 miles northwest along a graded dirt road from the water tank at Ventana; thence 3.85 miles west along a dirt road which follows a pipe line, 0.1 mile east of pipe line milepost number 51, 43 feet south of the center line of the road, 0.8 foot south of a metal witness post, about level with the road, and set in the top of a concrete post projecting 12 inches.

DESCRIPTION OF BENCH MARK

Designation J 337
State Arizona
County Pima
Nearest town Ventana
Distance and direction from nearest town 9.45 miles northwest
Chief of party D. Moncevicz
Leveling date November 1961
Stamping J 337 1961

Established by C&GS
Detailed description About 6.5 mile northwest along a graded dirt road from the water tank at Ventana; thence 2.95 miles west along a dirt road, which follows a pipe line, 92 feet north of the center line of the road, 122 feet north and across the road from pipe line milepost number 50, 1.6 feet north of a metal witness post, about level with the road, and set in the top of a concrete post projecting 6 inches.

DESCRIPTION OF BENCH MARK

Designation 17 WF (USGS)
State Arizona
County Pima
Nearest town Ventana
Distance and direction from nearest town 8.45 miles northwest
Chief of party D. Moncevicz
Leveling date November 1961
Stamping 17 WF 1948 2292

Established by US Geological Survey
Detailed description About 6.5 miles northwest along a graded dirt road from the water tank at Ventana; thence 1.95 miles west along a dirt road which follows a pipe line, 29 feet south of the center line of the road, 51 feet south of pipe line milepost number 49, 0.7 foot south of a metal witness post, about level with the road, and set in the top of a concrete post projecting 1 foot.

THE LINE LEAVES AND RE-ENTERS THE QUADRANGLE

DESCRIPTION OF BENCH MARK

Designation E 337
State Arizona
County Pima
Nearest town Ventana
Distance and direction from nearest town 4.8 miles northwest
Chief of party D. Moncevicz
Leveling date November 1961
Stamping E 337 1961

Established by C&GS
Detailed description About 4.8 miles northwest along a graded dirt road from the water tank at Ventana; 1.2 miles southeast of the church at Kaka, an indian village; 94 feet north of the junction of the center lines of the graded dirt road and a road leading north, 60 feet northeast of the center line of the graded dirt road, 33 feet west of the center line of the road leading north, 1.6 feet northwest of a metal witness post, about level with the road, and set in the top of a concrete post projecting 8 inches.

DESCRIPTION OF BENCH MARK

Designation D 337
State Arizona
County Pima
Nearest town Ventana
Distance and direction from nearest town 3.8 miles northwest
Chief of party D. Moncevicz
Leveling date November 1961
Stamping D 337 1961

Established by C&GS
Detailed description About 3.8 miles northwest along a graded dirt road from the water tank at Ventana; 2.2 miles southeast of the church at Kaka, an indian village; 43 feet southwest of the center line of the road, 1.9 feet southwest of a metal witness post, about level with the road, and set in the top of a concrete post projecting 7 inches.

DESCRIPTION OF BENCH MARK

Designation C 337
State Arizona
County Pima
Nearest town Ventana
Distance and direction from nearest town 2.75 miles west
Chief of party D. Moncevicz
Leveling date November 1961
Stamping C 337 1961

Established by C&GS
Detailed description About 2.75 miles west along a graded dirt road from the water tank at Ventana, set in the top of a black boulder which projects 2 feet and is located at the north end of a rocky ridge; 43 feet southwest of the center line of the road, and about 6 feet above the level of the road.

DESCRIPTION OF BENCH MARK

Designation B 337
State Arizona
County Pima
Nearest town Ventana
Distance and direction from nearest town 2.0 miles west
Chief of party D. Moncevicz
Leveling date November 1961
Stamping B 337 1961

Established by C&GS
Detailed description About 2.0 miles west along a graded dirt road from the water tank at Ventana, 77 feet north of the center line of the road, 1.5 feet north of a metal witness post, about 1 foot below the level of the road, and set in the top of a concrete post projecting 6 inches.

VERTICAL CONTROL DATA

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

by the
Coast and Geodetic Survey
SEA-LEVEL DATUM OF 1929

QUAD. 321122

ARIZ. 32°00' to 32°30'
LATITUDE 112°00' to 112°30'
LONGITUDE NI 12-10 AJO
DIAGRAM

DESCRIPTION OF BENCH MARK

Designation A 337 State Arizona County Pima
Nearest town Ventana Chief of party D. Moncevicz
Distance and direction from nearest town 1.0 mile west Date November 1961
Character of mark A C&GS Bench Mark Disk on a Copper/Coastal Disk A 337 1961
Established by C&GS Stamping

Detailed description About 1.0 mile west along a graded dirt road from the water tank at Ventana, 100 feet north of the center line of the road, 1.4 feet west of a metal witness post, about 1 foot below the level of the road, a disk on the top of a 5/8-inch copper coated rod that is driven to a depth of 18 1/2 feet and is encased in a 6-inch tile which projects 4 inches.

DESCRIPTION OF BENCH MARK

Designation Y 84 State Arizona County Pima
Nearest town Santa Rosa (Gu Achi) Chief of party
Distance and direction from nearest town 5.6 miles northeast Leveling date
Character of mark Standard disk Stamping
Established by USC&GS
Detailed description

5.6 miles northeast along the Casa Grande-Covered Wells road from the school at Santa Rosa (Gu Achi), Pima County, 3/4 mile northeast of an Indian village, 250 feet north of the corner of a wire fence, and 37 feet southeast of the centerline of the road. A standard disk, stamped "Y 84 1935" and set in the top of a concrete post.

DESCRIPTION OF BENCH MARK

Designation Z 84 State Arizona County Pima
Nearest town Santa Rosa (Gu Achi) Chief of party
Distance and direction from nearest town 3.6 miles north Leveling date
Character of mark Standard disk Stamping
Established by USC&GS
Detailed description

DESCRIPTION OF BENCH MARK

Designation W 84 State Arizona County Pima
Nearest town Gu Komelik Chief of party
Distance and direction from nearest town 6.0 miles south Leveling date
Character of mark Standard disk Stamping
Established by USC&GS
Detailed description

In Pima County, 6.0 miles south along the Casa Grande-Covered Wells road from the windmill at Gu Komelik, Pinal County, 300 yards north of a road curve to the southeast, and 41 feet west of the centerline of the road. A standard disk, stamped "W 84 1935" and set in the top of a concrete post.

DESCRIPTION OF BENCH MARK

Designation X 84 State Arizona County Pima
Nearest town Gu Komelik Chief of party
Distance and direction from nearest town 8.0 miles southwest Leveling date
Character of mark Standard disk Stamping
Established by USC&GS
Detailed description

In Pima County
8.0 miles southwest along the Casa Grande-Covered Wells road from the windmill at Gu Komelik, Pinal County, 7.6 miles northeast of Santa Rosa (Gu Achi), Pima County, 1/4 mile southwest of a 50-foot wire-fence enclosure, and 35 feet east of the centerline of the road. A standard disk, stamped "X 84 1935" and set in the top of a concrete post.

DESCRIPTION OF BENCH MARK

Designation A 85 Azimuth State Arizona County Pima
Nearest town Santa Rosa Chief of party
Distance and direction from nearest town 2.0 miles northwest Leveling date
Character of mark Bronze Azimuth Mark Disk Stamping
Established by United States Coast & Geodetic Survey
Detailed description

2.0 miles northwest along the Casa Grande Road from the school at Santa Rosa, 0.35 mile north of the "Y" junction of the new road, leading west to Ventana, at the "Y" junction of a track road leading northeast, on the top of a dirt barrier which forms a "Y" junction with the Casa Grande Road, 6 1/2 feet east of a point in line with a telephone line, 35 feet west of the center line of and about 1 1/2 feet higher than the road, and set in the top of a concrete post projecting 0.7 foot above the ground.

DESCRIPTION OF BENCH MARK

Designation A 85 State Arizona County Pima
Nearest town Santa Rosa Chief of party
Distance and direction from nearest town 1.6 miles northwest Leveling date
Character of mark Bronze Disk Stamping
Established by U. S. Coast and Geodetic Survey
Detailed description

1.6 miles northwest along the Casa Grande Road from the school at Santa Rosa, inside of the triangle formed by the Casa Grande Road and the old Ventana Road, about 75 yards south of the junction of the new road to Ventana, 105 feet south east of the center line of the northwest leg of a triangle, 5 1/2 feet west of the center line of and about 1 foot higher than the Casa Grande Road, set in the top of a concrete post projecting 0.2 foot above the ground.

VERTICAL CONTROL DATA

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

Coast and Geodetic Survey
by the
SEALEVEL DATUM OF 1929

QUAD. 321122
LATITUDE 32°00' to 32°30'
LONGITUDE 112°00' to 112°30'
DIAGRAM NI 12-10 AJO

Silver Ball Area
DESCRIPTION OF BENCH MARK

Designation A 85 B.M. 1
Nearest town Santa Rosa
Distance and direction from nearest town 1.6 miles northwest
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description Same description to reach as B.M. A 85, 45 feet west of the center line of and about 1 foot higher than the road, 25.1 feet north of 'A 85', and set in the top of a concrete post projecting 0.6 foot above the ground.

Silver Ball Area
DESCRIPTION OF BENCH MARK

Designation A 85 B.M. 2
Nearest town Santa Rosa
Distance and direction from nearest town 1.6 miles northwest
Character of mark Bronze Reference Mark Disk
Established by United States Coast & Geodetic Survey
Detailed description Same description to reach as B.M. A 85, 100 feet west of the center line of and about 1 foot higher than the road, 48.1 feet north of 'A 85', and set in the top of a concrete post projecting 0.6 foot above the ground.

Silver Ball Area
DESCRIPTION OF BENCH MARK

Designation R 310
Nearest town Santa Rosa
Distance and direction from nearest town 0.9 miles northwest
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description Santa Rosa, 0.1 mile northwest of the center line of and about 1 foot higher than the road, 2.6 feet northwest of a telephone pole, 2.0 feet southeast of a witness post, and set in a concrete post projecting 0.6 foot above the ground.

Silver Ball Area
DESCRIPTION OF BENCH MARK

Designation Santa Rosa
Nearest town Santa Rosa
Distance and direction from nearest town At Santa Rosa
Character of mark United States Coast & Geodetic Survey
Established by At Santa Rosa, 0.1 mile southwest of the school, about 100 yards east of the Casa Grande Covered Wells Road, at the northwest corner of the cemetery, 185.4 feet east of the northeast corner of the church building, 36.7 feet north of the northwest fence corner of cemetery, 51.5 feet northeast of the northeast corner of the concrete base of a wooden cross monument, fastened to the top of a 1 inch bronze shaft projecting 0.9 foot above the ground.

Silver Ball Area
DESCRIPTION OF BENCH MARK

Designation Santa B.M. 1
Nearest town Santa Rosa
Distance and direction from nearest town At Santa Rosa
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description Same description to reach as the Station, 58.3 feet northeast of the northwest fence corner of the cemetery, 40.4 feet east of the station, fastened to the top of a 1 inch bronze shaft projecting 0.9 foot above the ground.

Silver Ball Area
DESCRIPTION OF BENCH MARK

Designation Santa R.M. 2
Nearest town Santa Rosa
Distance and direction from nearest town At Santa Rosa
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description Same description to reach as the Station, 57.6 feet south of the station, 25.2 feet southeast of the northeast corner of the concrete base of the monument, 21.5 feet south of the northwest fence corner of the cemetery, fastened to the top of a 1 inch bronze shaft projecting 0.9 foot above the ground.

Silver Ball Area
DESCRIPTION OF BENCH MARK

Designation Q 310
Nearest town Santa Rosa
Distance and direction from nearest town 0.9 mile south
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.9 mile south along the Covered Wells Road from the school at Santa Rosa, about 185 yards north of the crossing of a levee, in line with a telephone line, about 0.45 mile north of the Store & Service Station, 103 feet east of the center line of and about 4 feet lower than the road, 3.7 feet south of a telephone pole, 2.0 feet north of a witness post, and set in the top of a concrete post projecting 0.5 foot above the ground.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 658 A

Silver Ball Area
RECOVERY NOTE, BENCH MARK

Designation B 85
Nearest town Santa Rosa
Distance and direction from nearest town At Santa Rosa
Character of mark United States Coast & Geodetic Survey
Established by Stamping
Present condition Search for, but not recovered, steps that the mark was described in may possibly have been re-built.

R

VERTICAL CONTROL DATA

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

by the
Coast and Geodetic Survey
SEA LEVEL DATUM OF 1929

Silver Ball Area

U. S. DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 685A
(1-6-58)

RECOVERY NOTE, BENCH MARK

Designation **C 85** State **Arizona** County **Pima**
Nearest town **Santa Rosa**
Distance and direction from nearest town **2.0 miles south**
Character of mark **Bronze Disk**
Established by **United States Coast & Geodetic Survey**
Present condition **Good**
Detailed report

2.0 miles south along the Covered Wells Road from the school at Santa Rosa, at a point where a drainage ditch which leads northeast joins the road, between the old and new roads, 0.7 mile south of the Store & Service Station at Santa Rosa, 195 feet east of the center line of and about 2 feet lower than the new road, 139.0 feet west of a telephone pole, 115.0 feet east of the east right-of-way fence, 25 feet west of the center line of and about level with the old road, and set in the top of a concrete post projecting 0.8 foot above the ground.

R

U. S. DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 685A
(1-6-58)

RECOVERY NOTE, BENCH MARK

Designation **F 85** State **Arizona** County **Pima**
Nearest town **Covered Wells**
Distance and direction from nearest town **5.0 miles northeast**
Character of mark **Standard disk**
Established by **USC&GS**
Present condition **NOT RECOVERED (USGS)**
Detailed report **Description is inadequate due to new road construction. Additional searching is recommended.**

5.0 miles northeast along the Casa Grande-Covered Wells road from the graveyard at Covered Wells, Pima County, midway between two washes which cross the road 200 feet apart, 100 yards between east of a road curve to the west, 110 feet north of a telephone line, and 36 feet north of the centerline of the road. A standard disk, stamped "F 85 1935" and set in the top of a concrete post.

R

U. S. DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 685A
(1-6-58)

RECOVERY NOTE, BENCH MARK

Designation **D 85** State **Arizona** County **Pima**
Nearest town **Santa Rosa (Gu Achi) County**
Distance and direction from nearest town **3.9 miles southwest**
Character of mark **Standard disk**
Established by **USC&GS**
Present condition **DESTROYED (USGS)**
Detailed report **The mark was destroyed during road construction.**

R

U. S. DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 685A
(1-6-58)

RECOVERY NOTE, BENCH MARK

Designation **G 85** State **Arizona** County **Pima**
Nearest town **Covered Wells**
Distance and direction from nearest town **3.0 miles northeast**
Character of mark **Standard disk**
Established by **USC&GS**
Present condition **NOT RECOVERED (USGS)**
Detailed report **The mark was reported destroyed by county highway-man.**

R

3.0 miles northeast along the Casa Grande-Covered Wells road from the graveyard at Covered Wells, Pima County, 24 feet east of the centerline of the road, and 20 feet west of a telephone line. A standard disk, stamped "G 84 1935" and set in the top of a concrete post.

NOTE--The disk is erroneously stamped "G 84" instead of "G 85."

DESCRIPTION OF BENCH MARK

Designation **E 85** State **Arizona** County **Pima**
Nearest town **Santa Rosa (Gu Achi) County**
Distance and direction from nearest town **5.8 miles southwest**
Character of mark **Standard disk**
Established by **USC&GS**
Detailed description

5.8 miles southwest along the Casa Grande-Covered Wells road from the school at Santa Rosa (Gu Achi), Pima County, 7.0 miles northeast of the graveyard at Covered Wells, 42 feet south of the centerline of the road, 40 feet north of a telephone line, and 6 feet northeast of a cactus. A standard disk, stamped "E 85 1935" and set in the top of a concrete post.

DESCRIPTION OF BENCH MARK

Designation **H 85** State **Arizona** County **Pima**
Nearest town **Covered Wells**
Distance and direction from nearest town **1.1 miles northeast**
Character of mark **Standard disk**
Established by **USC&GS**
Detailed description

1.1 miles northeast along the Casa Grande-Covered Wells road from the graveyard at Covered Wells, Pima County, 300 feet west of the crossing of a steep wash, 110 feet north of a telephone line, 40 feet south of a large cactus, and 27 feet north of the centerline of the road. A standard disk, stamped "H 85 1935" and set in the top of a concrete post.

VERTICAL CONTROL DATA

PAGE NO. 9

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

by the
Coast and Geodetic Survey
SEA LEVEL DATUM OF 1929

QUAD. 321122
ARIZ. 32°00' to 32°30'
LATITUDE 112°00' to 112°30'
LONGITUDE
DIAGRAM NI 12-10 A-0

LINE 104

Quijotoa-Vamori Area, Arizona
DESCRIPTION OF BENCH MARK

Designation Q 337
Nearest town Tracy
Distance and direction from nearest town 7.5 miles east
Character of mark A C&GS Bench Mark Disk
Established by C&GS

Detailed description About 6.6 miles east along State Highway 86 from the highway department maintenance camp at Tracy, an Indian village; thence 0.9 mile south along a graveled road; or about 0.35 mile southeast along a dirt road from the Mission Church at Pisinimo, an Indian village and thence 10.25 miles north along a graveled road, set in the top of a boulder which projects 6 inches, at the foot of a mountain and on the west side, 60 feet east of the center line of the road, 170 feet southeast and across the graveled road from a telephone pole, and about level with the road.

Quijotoa-Vamori Area, Arizona
DESCRIPTION OF BENCH MARK

Designation R 337
Nearest town Pisinimo
Distance and direction from nearest town 9.5 miles north
Character of mark A C&GS Bench Mark Disk
Established by C&GS

Detailed description About 0.35 mile southeast along a dirt road from the Mission Church at Pisinimo, an Indian village; thence 9.15 miles north along a graveled road; or about 6.6 miles east along State Highway 86 from the highway department maintenance camp at Tracy, an Indian village; thence 2.0 miles south along a graveled road; 69 feet west of the center line of the road, 37 feet northeast of a telephone pole braced with a guy wire, 1.9 feet west of a metal witness post, about level with the road, and set in the top of a concrete post projecting 7 inches.

Quijotoa-Vamori Area, Arizona
DESCRIPTION OF BENCH MARK

Designation S 337
Nearest town Pisinimo
Distance and direction from nearest town 8.5 miles north
Character of mark A C&GS Bench Mark Disk
Established by C&GS

Detailed description About 0.35 mile southeast along a dirt road from the Mission Church at Pisinimo, an Indian village; thence 8.15 miles north along a graveled road; 52 feet east of the center line of the road, 153 feet northeast and across the road from a telephone pole, 1.8 feet east of a metal witness post, about level with the road, and set in the top of a concrete post projecting 4 inches.

Quijotoa-Vamori Area, Arizona
DESCRIPTION OF BENCH MARK

Designation T 337
Nearest town Pisinimo
Distance and direction from nearest town 7.5 miles north
Character of mark A C&GS Bench Mark Disk
Established by C&GS

Detailed description About 0.35 mile southeast along a dirt road from the Mission Church at Pisinimo, an Indian village; thence 7.15 miles north along a graveled road; 95 feet west of the center line of the road, 103 feet southeast of a telephone pole, 2.0 feet west of a metal witness post, about level with the road, and set in the top of a concrete post projecting 7 inches.

Quijotoa-Vamori Area, Arizona
DESCRIPTION OF BENCH MARK

Designation U 337
Nearest town Pisinimo
Distance and direction from nearest town 6.4 miles north
Character of mark A C&GS Bench Mark Disk
Established by C&GS

Detailed description About 0.35 mile southeast along a dirt road from the Mission Church at Pisinimo, an Indian village; thence 6.05 miles north along a graveled road; 61 feet west of the center line of the road, 9 feet south of a telephone pole, 1.6 feet west of a metal witness post, about level with the road, and set in the top of a concrete post projecting 8 inches.

Quijotoa-Vamori Area, Arizona
DESCRIPTION OF BENCH MARK

Designation V 337
Nearest town Pisinimo
Distance and direction from nearest town 5.3 miles north
Character of mark A C&GS Bench Mark Disk on a Copper Coated Rod
Established by C&GS

Detailed description About 0.35 mile southeast along a dirt road from the Mission Church at Pisinimo, an Indian village; thence 4.95 miles north along a graveled road; 80 feet west of the center line of the road, 1.4 feet west of a metal witness post, about level with the road, and on a 5/8-inch copper coated rod that is driven to a depth of 16 feet and is encased in a 6-inch tile which projects 6 inches.

Quijotoa-Vamori Area, Arizona
DESCRIPTION OF BENCH MARK

Designation W 337
Nearest town Pisinimo
Distance and direction from nearest town 4.3 miles north
Character of mark A C&GS Bench Mark Disk
Established by C&GS

Detailed description About 0.35 mile southeast along a dirt road from the Mission Church at Pisinimo, an Indian village; thence 3.95 miles north along a graveled road; 62 feet west of the center line of the road, 160 feet northeast of a telephone pole, 1.8 feet west of a metal witness post, about level with the road, and set in the top of a concrete post projecting 2 inches.

VERTICAL CONTROL DATA

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

by the
Coast and Geodetic Survey
SCALE DATUM OF 1929

QUAD. 321122
ARIZ. 32°00' to 32°30'
LATITUDE 112°00' to 112°30'
LONGITUDE NI 12-10 AJ0
DIAGRAM

Quijotoa-Vamori Area, Arizona
DESCRIPTION OF BENCH MARK

Designation X 337
Nearest town Pisinimo
Distance and direction from nearest town 3.3 miles north
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Detailed description About 0.35 mile southeast along a dirt road from the Mission Church at Pisinimo, an indian village; thence 2.95 miles north along a graveled road; 139 feet northwest of the center of the junction of the graveled road and a road leading southwest, 98 feet west of the center line of the road, 27 1/2 feet south of a telephone pole, 1.5 feet west of a metal witness post, about level with the road, and set in the top of a concrete post projecting 6 inches.

County Pima
Chief of party D. Moncevicz
Leveling date October 1961
Stamping X 337 1961

Designation Pisinemo R.M. 1
Nearest town Pisinimo
Distance and direction from nearest town at Pisinimo
Character of mark A C&GS Reference Mark Disk
Established by C&GS
Detailed description At Pisinimo, an indian village; 66.9 feet north of Pisinemo 1935, 50.8 feet northwest of the northwest corner of the Mission Church Rectory, 36 feet northwest of the northwest corner of the fence around the rectory, 1.1 feet west of a metal witness post, and set in the top of a concrete post projecting 4 inches.

County Pima
Chief of party D. Moncevicz
Leveling date October 1961
Stamping PISINEMO NO 1 1935

Quijotoa-Vamori Area, Arizona
DESCRIPTION OF BENCH MARK

Designation Y 337
Nearest town Pisinimo
Distance and direction from nearest town 2.3 miles north
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Detailed description About 0.35 miles southeast along a dirt road from the Mission Church at Pisinimo, an indian village; thence 1.95 miles north along a graveled road; 86 feet west of the center line of the road, 14 feet south of a telephone pole, 1.6 feet west of a metal witness post, about level with the road, and set in the top of a concrete post projecting 6 inches.

County Pima
Chief of party D. Moncevicz
Leveling date October 1961
Stamping Y 337 1961

Quijotoa-Vamori Area, Arizona
DESCRIPTION OF BENCH MARK

Designation Pisinemo 1935
Nearest town Pisinimo
Distance and direction from nearest town at Pisinimo
Character of mark A C&GS Triangulation Station Disk
Established by C&GS
Detailed description At Pisinimo, an indian village; 251 feet northwest of the southwest corner of the Mission Church, 50.0 feet northwest of the southwest corner of the Mission Church Rectory, 42.6 feet southwest of the northwest corner of the rectory, 17 feet west of a fence around the rectory, 14 feet north of an east-west fence line, 66.9 feet south of Pisinemo R.M. 1, about level with the ground, and set in the top of a concrete post which is flush with the ground.

County Pima
Chief of party D. Moncevicz
Leveling date October 1961
Stamping PISINEMO 1935

Quijotoa-Vamori Area, Arizona
DESCRIPTION OF BENCH MARK

Designation Z 337
Nearest town Pisinimo
Distance and direction from nearest town 1.3 miles northeast
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Detailed description About 0.35 mile southeast along a dirt road from the Mission Church at Pisinimo, an indian village; thence 0.95 mile north along a graveled road; 79 feet east of the center line of the road, 134 feet southeast of and across the road from a telephone pole, 1.6 feet east of a metal witness post, about level with the road, and set in the top of a concrete post projecting 6 inches.

County Pima
Chief of party D. Moncevicz
Leveling date October 1961
Stamping Z 337 1961

Quijotoa-Vamori Area, Arizona
DESCRIPTION OF BENCH MARK

Designation Pisinemo RM 3
Nearest town Pisinimo
Distance and direction from nearest town at Pisinimo
Character of mark A C&GS Reference Mark Disk
Established by C&GS
Detailed description At Pisinimo, an indian village; 787 feet northeast of Pisinemo RM 1, 227 feet east of a concrete and pole loading chute at a stock pen, 120 feet southeast of the center line of a trail road leading northeast, and set in the top of a concrete post projecting 6 inches.

County Pima
Chief of party D. Moncevicz
Leveling date October 1961
Stamping PISINEMO NO 3 1935

Quijotoa-Vamori Area, Arizona
DESCRIPTION OF BENCH MARK

Designation B 339
Nearest town Pisinimo
Distance and direction from nearest town 0.35 mile southeast
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Detailed description About 0.35 mile southeast along a dirt road from the Mission Church at Pisinimo, an indian village; 61 feet northeast of the center of the junction of the dirt road and a graveled road, 49 feet east of the center line of the graveled road, 49 feet northeast of the dirt road, 1.6 feet northeast of a metal witness post, about level with the road, and set in the top of a concrete post projecting 4 inches.

County Pima
Chief of party D. Moncevicz
Leveling date October 1961
Stamping B 339 1961

Quijotoa-Vamori Area, Arizona
DESCRIPTION OF BENCH MARK

Designation A 339
Nearest town Pisinimo
Distance and direction from nearest town 1.35 miles southeast
Character of mark A C&GS Bench Mark Disk on a Copper
Established by C&GS
Detailed description About 0.35 mile southeast along a dirt road from the Mission Church at Pisinimo, an indian village; thence 1.0 mile south-east along a trail road; 60 feet southwest of the center line of the trail road, 1.8 feet southwest of a metal witness post, about level with the road, and on a 5/8-inch copper coated rod that is driven to a depth of 16 feet and is encased in a 6-inch tile which projects 3 inches.

County Pima
Chief of party D. Moncevicz
Leveling date October 1961
Stamping A 339 1961

NOTE: This mark is 0.35 miles southeast of a 4x4-inch white wooden reference post which projects 16 feet and is numbered 59.

NOTE: This mark is 0.5 mile northwest of a 4x4-inch white wooden reference post which projects 16 feet and is numbered 59.

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

by the
Coast and Geodetic Survey
SEA LEVEL DATUM OF 1929

QUAD. 321122
ARIZ.
LATITUDE 32°00' to 32°30'
LONGITUDE 112°00' to 112°30'
DIAGRAM NI 12-10 AJO

Chilotos-Vamori Area, Arizona DESCRIPTION OF BENCH MARK

Line 104 Line 105

Designation C 339
Nearest town Pisinimo
Distance and direction from nearest town 2.35 miles southeast
Character of mark A C&GS Bench Mark Disk
Established by C&GS
Detailed description About 0.35 mile southeast along a dirt road from the Mission Church at Pisinimo; an Indian village; thence 2.0 miles south-east along a trail road; about 150 feet southeast of a wash, 42 feet northeast of the center line of the trail road, 1.6 feet northwest of a metal witness post, about level with the road, and set in the top of a concrete post projecting 7 inches.

NOTE: This mark is 1.35 miles southeast of a 4x4-inch white wooden reference post which projects 16 feet and is numbered 59.

LINE 105

Silver Bell Area DESCRIPTION OF BENCH MARK

Designation A 311
Nearest town Santa Rosa
Distance and direction from nearest town 2.35 miles east
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 2.35 miles east along a dirt track road from the school at Santa Rosa; 0.2 mile northwest of an adobe shed, at a point where the road crosses the south end of a clearing, about 40 yards northwest of the southeast edge of a clearing, 26 feet south of a center line of and about level with the road, 2.9 feet southeast of a witness post, and set in a concrete post projecting 0.7 foot.

Silver Bell Area DESCRIPTION OF BENCH MARK

Designation J 91
Nearest town Santa Rosa
Distance and direction from nearest town 1.35 miles east
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.2 mile east of a 75 feet square fence around a range study plot, at the "Y" junction of a graded road leading southeast, inside of the west end of an oblong triangle formed by the divided portion of the main road, about 45 yards northeast of the south one of 3 sequoias, 31 feet northeast of and across the south leg from the center line of the graded road, 25 feet south of the center line of the north leg of the triangle, 82 feet north of the center line of the south leg of the triangle, 2.0 feet north of a witness post, and about level with the road, and set in a concrete post projecting 0.9 foot.

Silver Bell Area DESCRIPTION OF BENCH MARK

Designation Z 310
Nearest town Santa Rosa
Distance and direction from nearest town 0.45 miles east
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.45 mile east along a dirt track road from the school at Santa Rosa, about 125 yards northwest of the northeast corner of a fence around a reservoir, about 100 yards northeast of the northwest end of a levee which extends from the reservoir, 12 feet north of the center line of and about level with the road, 9.3 feet east of a lone 8 inch ironwood tree, 2.9 feet west of a witness post, and set in a concrete post projecting 0.6 foot.

Silver Bell Area DESCRIPTION OF BENCH MARK

Designation S 310
Nearest town Santa Rosa
Distance and direction from nearest town 2.45 miles northwest
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 1.6 miles northwest along the Casa Grande Road from the school at Santa Rosa, thence 0.85 mile west along a graded road, 0.5 mile west of the north end of a levee, on the south slope of a rocky hill with an abandoned mine, in the south end of a sloping rock ledge, 193 feet north of the center line of and about 10 feet higher than the road, 116 feet northwest of a telephone pole, 62 feet lower than the highest part of a ledge, 0.5 foot north of the south edge of a ledge, and set in a concrete post projecting 12 feet above the ground.

Silver Bell Area DESCRIPTION OF BENCH MARK

Designation A 90
Nearest town Santa Rosa
Distance and direction from nearest town 3.95 miles northwest
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 1.6 miles northwest along the Casa Grande Road from the school at Santa Rosa, thence, 1.95 mile west along a graded road, about 200 yards east of a point where a northwest-southeast dirt barrier junctions with the road, 65 feet south of a telephone pole, 57 feet north of the center line of a dirt barrier, 27 feet south of the center line of and about level with the road, 2.3 feet north of a witness post, and set in a concrete post projecting 0.5 foot above the ground.

Silver Bell Area DESCRIPTION OF BENCH MARK

Designation T 310
Nearest town Santa Rosa
Distance and direction from nearest town 4.65 miles northwest
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 1.6 miles northwest along the Casa Grande Road from the school at Santa Rosa, thence 3.05 miles west along a graded road 0.25 mile west of a slight curve in the road, about in line with a telephone line, 572 feet northwest of the point where a drainage ditch east of the junction with the road, 55 feet north of the center line of and about level with the road, 3.0 feet west of a telephone pole, 2.0 feet east of a witness post, and set in the top of a concrete post projecting 0.4 foot above the ground.

VERTICAL CONTROL DATA

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

by the
Coast and Geodetic Survey
SEA-LEVEL DATUM OF 1929

QUAD. 321122
ARIZ. 32°00' to 32°30'
LATITUDE 112°00' to 112°30'
LONGITUDE NI 12-10 AJO
DIAGRAM

Silver Bell Area
DESCRIPTION OF BENCH MARK

B 90 Santa Rosa Arizona Pima County
Nearest town
Distance and direction from nearest town 5.5 miles northwest
Character of mark
Established by United States Coast & Geodetic Survey
Detailed description 1.6 miles northwest along the Casa Grande Road from the school at Santa Rosa, thence 3.9 miles west along a graded road, 0.2 mile west of a curve in the road, 39 feet north of the center line of and about level with the road, 15.5 feet south of a point in line with a telephone line, 2.4 feet west of a witness post, and set in the top of a concrete post projecting 0.5 foot above the ground.

Stamping B 90 1935

Silver Bell Area
DESCRIPTION OF BENCH MARK

D 90 Santa Rosa Arizona Pima County
Nearest town
Distance and direction from nearest town 9.35 miles northwest
Character of mark
Established by United States Coast & Geodetic Survey
Detailed description 1.6 miles northwest along the Casa Grande Road from the school at Santa Rosa, thence 7.35 miles west along a graded road, thence 0.4 mile north along a track road, 9.4 miles southeast of the water tank at Ventana, about 300 yards north of the crossing of a deep sandy wash, at a mesquite covered flat, about 65 yards south of a rock covered clearing, 11 feet east of the center line of and about level with the road, 2.7 feet south of a witness post, and set in a concrete post projecting 0.6 foot above the ground.

Stamping D 90 1935

Silver Bell Area
DESCRIPTION OF BENCH MARK

V 310 Santa Rosa Arizona Pima County
Nearest town
Distance and direction from nearest town 6.5 miles northwest
Character of mark
Established by United States Coast & Geodetic Survey
Detailed description 1.6 miles northwest along the Casa Grande Road from the school at Santa Rosa, thence 4.9 miles west along a graded road 0.35 mile west of a curve in the road, at a point where a northeast-southwest drainage ditch crosses under a telephone line, in line with the telephone line, 56 feet north of the center line of and about level with the road, 6.7 feet north of the center line of the drainage ditch, 3.5 feet east of a telephone pole, 2.5 feet west of a witness post, and set in the top of a concrete post projecting 0.5 foot above the ground.

Stamping V 310 1952

Silver Bell Area
DESCRIPTION OF BENCH MARK

W 310 Ventana Arizona Pima County
Nearest town
Distance and direction from nearest town 8.4 miles southeast
Character of mark
Established by United States Coast & Geodetic Survey
Detailed description 3.75 miles east along a track road from the water tank at Ventana, thence 4.65 miles south along a track road, about 65 yards north of the crossing of a large gravel wash with Palo Verde trees on either side, at a rock covered clearing on top of a slight ridge, 37 feet north of a large iron wood tree, 29 feet west of the center line of and about 1 foot higher than the road, 2.5 feet south of a witness post, and set in the top of a concrete post projecting 0.7 foot above the ground.

Stamping W 310 1952

Silver Bell Area
DESCRIPTION OF BENCH MARK

C 90 Santa Rosa Arizona Pima County
Nearest town
Distance and direction from nearest town 7.45 miles northwest
Character of mark
Established by United States Coast & Geodetic Survey
Detailed description 1.6 miles northwest along the Casa Grande Road from the school at Santa Rosa, thence 5.85 miles west along a graded road, 0.5 mile west of a wide curve in the road, 0.1 mile west of a point where a drainage ditch crosses under a telephone line, 40 feet south of the center line of a small drainage ditch, 33 feet northeast of the center line of and about level with the road, 17 feet south of a point in line with a telephone line, 2.6 feet west of a witness post, and set in the top of a concrete post projecting 0.4 foot above the ground.

Stamping C 90 1935

Silver Bell Area
DESCRIPTION OF BENCH MARK

E 90 Ventana Arizona Pima County
Nearest town
Distance and direction from nearest town 7.45 miles southeast
Character of mark
Established by United States Coast & Geodetic Survey
Detailed description 3.75 miles east along a track road from the water tank at Ventana, thence 3.7 miles south along a track road, at the center of a barren rocky flat, 117 feet northeast and across the road from a lone Giant Saguro, 20 feet east of the center line of and about level with the road, 2.5 feet south of a witness post, and set in the top of a concrete post projecting 0.8 foot above the ground.

Stamping E 90 1935

Silver Bell Area
DESCRIPTION OF BENCH MARK

V 310 Santa Rosa Arizona Pima County
Nearest town
Distance and direction from nearest town 8.55 miles northwest
Character of mark
Established by United States Coast & Geodetic Survey
Detailed description 1.6 miles northwest along the Casa Grande Road from the school at Santa Rosa, thence 6.95 miles west along a graded road, 0.6 mile west of a 50 foot square fence around a Range Study Plot, about 90 yards west of a lone Giant Saguro, at the junction of a track road leading north about in line with a telephone line, 71 feet northeast of the center of the junction, 49 feet north of the center line of and about level with the road, 5.0 feet west of a telephone pole, 3.0 feet east of a witness post, and set in the top of a concrete post projecting 0.3 foot above the ground.

Stamping V 310 1952

Silver Bell Area
DESCRIPTION OF BENCH MARK

X 310 Ventana Arizona Pima County
Nearest town
Distance and direction from nearest town 6.4 miles southeast
Character of mark
Established by United States Coast & Geodetic Survey
Detailed description 3.75 miles east along a track road from the water tank at Ventana, thence 2.65 miles south along a track road, about 0.85 mile south of a gate at a fence line, about 75 yards southwest of a large wash with Palo Verde tree on either side, about 50 yards southwest of a point where the road crosses a wash between two ridges, at a small flat covered with mesquite, 40 feet east of the center line of and about level with the road, 2.5 feet south of a witness post.

Stamping X 310 1952

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

by the
Coast and Geodetic Survey
SEALEVEL DATUM OF 1929

QUAD. 321122
ARIZ. 32°00' to 32°30'
LATITUDE 112°00' to 112°30'
LONGITUDE NI 12-10 AJO
DIAGRAM

Silver Bell Area DESCRIPTION OF BENCH MARK

Designation **F 90** State **Arizona** County **Pima**
Nearest town **Ventana**
Distance and direction from nearest town **5.5 miles east**
Character of mark **Bronze Disk**
Established by **United States Coast & Geodetic Survey**
Detailed description **3.75 miles east along a track road from the water tank at Ventana, thence 1.75 miles south along a track road, about 150 yards north of the crossing of a wire gate, between the road and a small gravel wash, 38 feet southeast and across the road from a Giant Saguaro, 24½ feet northwest of the center line of a wash, 17 feet east of the center line of and about level with the road, 2.5 feet north of a witness post, and set in the top of a concrete post projecting 0.8 foot above the ground.**

Silver Bell Area DESCRIPTION OF BENCH MARK

Designation **I 311** State **Arizona** County **Pima**
Nearest town **Ventana**
Distance and direction from nearest town **4.45 miles east**
Character of mark **Bronze Disk**
Established by **United States Coast & Geodetic Survey**
Detailed description **3.75 miles east along a track road from the water tank at Ventana, thence 0.7 miles south along a track road, 0.5 mile north of the crossing of a wire gate in the crotch of a Y-junction of a track road leading north about 100 yards south of an abandoned mine, 36 feet west of the center line of the road, 25 feet northeast of the center line of and about 1½ feet lower than the main road, 4.2 feet south of a witness post, and set in the top of a concrete post projecting 0.7 foot above the ground.**

Silver Bell Area DESCRIPTION OF BENCH MARK

Designation **G 90** State **Arizona** County **Pima**
Nearest town **Ventana**
Distance and direction from nearest town **3.75 miles east**
Character of mark **Bronze Disk**
Established by **United States Coast & Geodetic Survey**
Detailed description **3.75 miles east along a track road from the water tank at Ventana, about ½ mile due east of a high rocky isolated peak, 72 feet south of the crossing of a wash and the Y-junction of a track road leading north, at the Y-junction of a track road leading east, 17 feet west of the center line of and about level with the main road and the junction of a track road leading east, 1.7 feet east of a witness post, and set in the top of a concrete post projecting 0.2 foot above the ground.**

Silver Bell Area DESCRIPTION OF BENCH MARK

Designation **M 311** State **Arizona** County **Pima**
Nearest town **Ventana**
Distance and direction from nearest town **2.7 miles east**
Character of mark **Bronze Disk**
Established by **United States Coast & Geodetic Survey**
Detailed description **2.7 miles east along a track road from the water tank at Ventana, 15.8 miles southeast of the well at the Indian Village of Quajobe, in the crotch of the Y-junction of a track road leading east, 112.1 feet east of the M 311 R.M.(USGS), 66 feet south of a Palo Verde tree, 30 feet northeast of the center line of and about 2 feet higher than the main road, 25 feet south of the center line of the track road, 2.4 feet east of a witness post, and set in the top of a concrete post projecting 0.7 foot above the ground.**

Silver Bell Area DESCRIPTION OF BENCH MARK

Designation **M 311 RM(USGS)** State **Arizona** County **Pima**
Nearest town **Ventana**
Distance and direction from nearest town **2.7 miles east**
Character of mark **Iron Bolt**
Established by **United States Geological Survey**
Detailed description **Same description to reach as B.M. M 311, 112.1 feet west of B.M. M 311, 36 feet south of the center of the road junction and the center line of the main road, about level with the road, and set in the top of a concrete post projecting 0.4 foot above the ground.**

Silver Bell Area DESCRIPTION OF BENCH MARK

Designation **H 90** State **Arizona** County **Pima**
Nearest town **Ventana**
Distance and direction from nearest town **1.6 miles east**
Character of mark **Bronze Disk**
Established by **United States Coast & Geodetic Survey**
Detailed description **0.25 mile east of the south end of a levee, about 50 yards northeast of a small knoll, on a slight eastward rise between the former road and a small sandy wash, 108 feet north of the center line of and about 3 feet lower than the road, 16 feet north of the center line of the former road, 11½ feet south of the center line of the wash, 2.2 feet east of a witness post, and set in the top of a concrete post projecting 1.0 foot above the ground.**

RECOVERY NOTE, BENCH MARK

Designation **N 311** State **Arizona** County **Pima**
Nearest town **Ventana**
Distance and direction from nearest town **0.6 mile east**
Character of mark **A C&GS Bench Mark Disk**
Established by **C&GS**
Present condition **Good**
Detailed report **Recovered as described on Silver Bell Area, Arizona, 51 Arizona, on line number 10, titled Santa Rosa(Gu Achil) to 3.2 miles west of Bitter Well(Sif Vaya) on lithograph list dated June 30, 1953, reprinted October 30, 1958.**

Silver Bell Area DESCRIPTION OF BENCH MARK

Designation **N 311 R.M.(USGS)** State **Arizona** County **Pima**
Nearest town **Ventana**
Distance and direction from nearest town **0.6 mile east**
Character of mark **Iron Bolt**
Established by **United States Geological Survey**
Detailed description **Same description to reach as B.M. N311, 52.7 feet north and across the road from N311, 17 feet north of the center line of and about level with the road, 6.4 feet south of a 4½ feet high wooden post, and set in the top of a concrete post projecting 0.5 foot above the ground.**

FORM 6854
(1-8-58)
U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

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

by the
Coast and Geodetic Survey
SEA-LEVEL DATUM OF 1929

QUAD. 321122

ARIZ.

LATITUDE 32°00' to 32°30'

LONGITUDE 112°00' to 112°30'

DIAGRAM NI 12-10 AJO

FORM 685A
(1-5-58)U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

R

RECOVERY NOTE, BENCH MARK

Designation J 90
Nearest town Ventana
Distance and direction from nearest town at Ventana
Character of mark A. C&GS Bench Mark Disk
Established by C&GS
Present condition Good
Detailed report Recovered as described on Silver Bell Area, Arizona, 51
Arizona, on line number 10, titled Santa Rosa (Gu Achi) to 3.2 miles
west of Bitter Well (Sif Vaya) on lithograph list dated June 30, 1953,
reprinted October 30, 1958.

State Arizona
County Pima
Chief of Party D. Moncevicz
Recovery Date November 1961
Stamping J 90 1935

LINE 106

Silver Bell Area
DESCRIPTION OF BENCH MARK

1974-2 (USGS)
Designation Quajote
Nearest town Distance and direction from nearest town 9.8 miles southwest
Character of mark Iron Bolt
Established by United States Geological Survey
Detailed description Indian Village of Quajote, thence 2.6 miles southeast along a graveled road from the well at the junction of a dim road leading north, on top of a rocky hill, 60 feet west of the approximate center of the junction, 48 feet northwest of the center line of the road, and an iron bolt set in the top of a concrete post projecting 0.7 foot above the ground, and about level with the road.

State Arizona

County Pinal

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Silver Bell Area
DESCRIPTION OF BENCH MARK

P 311
Nearest town Ventana
Distance and direction from nearest town 0.9 miles north
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 0.9 mile north along a track road from the water tank at Ventana, about 100 yards west southwest of the north end of a levee, about 90 yards north of the crossing of a wash, 21 feet east of the center line of and about level with the road, 2.6 feet north of a witness post, and set in the top of a concrete post projecting 0.6 foot above the ground.

State Arizona

County Pinal

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Silver Bell Area
DESCRIPTION OF BENCH MARK

K 90
Nearest town Ventana
Distance and direction from nearest town 1.9 miles north
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 1.9 miles north along a track road from the water tank at Ventana, about 3/4 mile southwest of a mountain, about midway between two ridges, on the west slope of a hillside covered with grease wood and Palo Verde trees, 11 feet east of the center line of and about 1 foot higher than the road, 1.4 foot west of a witness post, and set in the top of a concrete post projecting 0.7 foot above the ground.

State Arizona

County Pinal

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Silver Bell Area
DESCRIPTION OF BENCH MARK

K 91
Nearest town Quajote
Distance and direction from nearest town 10.9 miles southwest
Character of mark Bronze Disk
Established by United States Coast & Geodetic Survey
Detailed description 2.6 miles southeast along a graveled road from the well at the Indian Village of Quajote, thence 8.3 miles southwest along a graded road, on the northeast slope of a rocky hillside, 20 feet southeast of the center line of the road, 1.6 feet northwest of a witness post, and set in the top of a concrete post projecting 0.3 foot above the ground, and about level with the road.

State Arizona

County Pinal

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VERTICAL CONTROL DATA

by the
Coast and Geodetic Survey
SEA LEVEL DATUM OF 1929QUAD. 321122
ARIZ. 32°00' to 32°30'
LATITUDE 112°00' to 112°30'
LONGITUDE NI 12-10 AJO
DIAGRAMSilver Bell Area
DESCRIPTION OF BENCH MARK

Designation **L 91** State **Arizona** County **Pima**
 Nearest town **Quajote**
 Distance and direction from nearest town **12.9 miles southwest**
 Character of mark **Bronze Disk**
 Established by **United States Coast & Geodetic Survey**
 Detailed description **2.6 miles southeast along a gravelled road from the well at the Indian Village of Quajote, thence 10.3 miles southwest along a graded road, about 97 yards northeast of an Indian hut, about 85 yards northwest of a hut, 17 feet northwest of the center line of the road, 1.3 feet southeast of a witness post, and set in the top of a concrete post projecting 0.4 foot above the ground, and about level with the road.**

Line 106

Silver Bell Area
DESCRIPTION OF BENCH MARK

Designation **2245.6 (USGS)** State **Arizona** County **Pima**
 Nearest town **Quajote**
 Distance and direction from nearest town **13.9 miles southwest**
 Character of mark **Iron Bolt**
 Established by **United States Geological Survey**
 Detailed description **2.6 miles southeast along a gravelled road from the well at the Indian Village of Quajote, thence 11.5 miles southwest along a graded road on top of a steep ridge, 548 feet north of the center line of the road, and an iron bolt set in the top of a concrete post projecting 0.4 foot above the ground, and about 1 1/2 feet higher than the road.**

Silver Bell Area
DESCRIPTION OF BENCH MARK

Designation **K 91** State **Arizona** County **Pima**
 Nearest town **Quajote**
 Distance and direction from nearest town **14.9 miles southwest**
 Character of mark **Bronze Disk**
 Established by **United States Coast & Geodetic Survey**
 Detailed description **2.6 miles southeast along a gravelled road from the well at the Indian Village of Quajote, thence 12.3 miles southwest along a graded road on the northwest slope of a grade about 0.3 mile southwest of 2 abandoned shacks, about 125 yards south of the crossing at a large wash, 36 feet southeast of the center line of the road, 12 feet road crosses a large wash, 36 feet southeast of the center line of the road, 12 feet southwest of a twin giant cactus, 1.3 feet west of a witness post, and set in the top of a concrete post projecting 0.4 foot above the ground, and about 1 foot higher than the road.**

Line 106

5th ed Images mts
POZO REDONDO (77)

Arizona

J.G. Ransom, 1930

Third Order

Adjusted Elevations Based
On Sea Level Datum of 1929

Book: B 4054

Latitude $32^{\circ}15'$

Longitude $112^{\circ}30'$

- (1) FROM TONOCA QUADRANGLE (57) NORTH AND NORTHWEST ALONG ROADS
INTO AJO QUADRANGLE (78)

Ajo, 11.7 mi. SE. of along State Highway 86, at junction of old
Sonoyta-Ajo Highway, 176 ft. SW. of center of State Highway 86,
28 ft. SE. of old highway, 4 ft. SE. of a cast iron post, in
concrete post; standard tablet stamped "R 26 1930" (Recovered by
C&GS, 1953)

Triangulation station "TARGET NO 2" (C&GS)

Latitude: $32^{\circ}15'25.84''$ Longitude: $112^{\circ}44'00.93''$ (Bull. 224)

1800.016

12/3/63 dw *alc*

POZO REDONDO (77)

Arizona

J.G. Ransom, 1931

R.R. Moore, 1962

Third Order

Adjusted Elevations Based

On Sea Level Datum of 1929

Books: B 4055

PV 444

Latitude 32°15'

Longitude 112°30'

(2) FROM AJO QUADRANGLE (78) EAST, SOUTH AND NORTHEAST ALONG ROAD INTO THE QUIJOTOA NO. 2 QUADRANGLE (76)

Childs Ranch, 7.4 mi. NE. of, 15 ft. N. of rd., in concrete post; standard tablet stamped "R 37 1930"

1703.250

Childs Ranch, 7.4 mi. NE. of, 3.5 mi. N. of Pozo Redondo, 15 ft. E. of rd., in concrete post; standard tablet stamped "R 38 1930" (Destroyed, 1962)

1803.915

Sikort Chuapo, 275 ft. S. of church, in intersection of rds., in concrete post; standard tablet stamped "R 39 1930"

1904.080

Sikort Chuapo, 2.9 mi. S. of, 10 ft. W. of rd., in concrete post; standard tablet stamped "R 40 1930"

2014.180

Charco de la Pietra, 0.7 mi. W. of, 5.6 mi. S. of Pozo Redondo, 100 ft. SE. of rd. intersection, at point of rocky outcrop, in lava outcrop; standard tablet stamped "R 41 1930"

2070.856

Charco de la Pietra, 2 mi. NE. of, 100 ft. W. of rd., 3 ft. above ground, in large boulder S. of high boulders; standard tablet stamped "R 42 1930"

2150.392

Charco de la Pietra, 5 mi. NE. of, on top of small ridge, 15 ft. E. of rd., in concrete post; standard tablet stamped "R 43 1930"

2204.357

Charco de la Pietra, 8 mi. NE. of, 15 ft. E. of rd., in concrete post; standard tablet stamped "R 44 1930"

New Description: Hickiwan Rd. Junction, 3.8 mi. SW. to a drain crossing rd., thence 0.6 mi. NW. cross-country at right angles from highway, 40 ft. W. of a small drain, in concrete post projecting 12 in. above ground; standard tablet stamped "R 44 1930"

2194.655

12/3/63 dw *etc*

POZO REDONDO (77)

Arizona

G.W. Moore, 1948

Third Order

Adjusted Elevations Based
On Sea Level Datum of 1929

Book: PV 48

FILE COPY

Latitude 32°15' Longitude 112°30'

- (3) FROM QUIJOTOA NO. 2 QUADRANGLE (76) WEST AND NORTH ALONG ROAD
INTO THE HAT MTN. QUADRANGLE (101)

Emika, 2.2 mi. N. thence 1 mi. W. from, 225 ft. W. of pipe line Milepost 59, 15 ft. S. of rd., in concrete post; iron rod	2356.76
Emika, 2.2 mi. N. thence 2 mi. W. from, 30 ft. SW. of Milepost 60, 32 ft. S. and 58 ft. E. of Toapitk Crossroads, in concrete post; standard tablet stamped "50 GWM 1948 2379"	2379.501
Reference mark, 132 ft. NW. of tablet, in concrete post; steel rod	2379.99
Toapitk Crossroads, 1 mi. NW. of, 0.2 mi. NW. of rd. junction, 30 ft. NE. of rd., in concrete post; iron rod	2417.5
Toapitk Crossroads, 2 mi. NW. of, 29 ft. E. of rd., in concrete post; standard tablet stamped "51 GWM 1948 2459"	2458.854
Reference mark, 111 ft. N. of tablet, in concrete post; steel rod	2459.49

12/3/63 dw *dc*

Third Order

Adjusted Elevations Based
On Sea Level Datum of 1929
And Suppl. Adj. of 1958

Book: PV 444

Latitude 32°15' Longitude 112°30'

(4) FROM THE NORTH EDGE OF TONOCA QUADRANGLE (57) NORTHEAST INTO
QUIJOTOA NO. 2 QUADRANGLE (76) TWO MILES WEST OF HICKIWAN

0.95 mi. N. of BM "3 LC 1961", 70 ft. E. of prominent drain, 25 ft.
E. and 5 ft. higher than center of gravel rd., large flat boulder
in place; chiseled square 2151.446

Ajo, 22 mi. E. of along State Highway 86, to junction of gravel rd.,
thence 5 mi. N. to a curve at top of rise, 35 ft. W. and 2 ft. higher
from center of rd., concrete post projecting 4 in.; standard tablet
stamped "4 LC 1961 2177" 2176.715

Reference mark, 68 ft. SE. of tablet and 4 ft. lower, rock in place;
chiseled square 2172.605

0.82 mi. N. of BM "4 LC 1961", 30 ft. NW. of center of rd. and 1 ft.
higher, 10 ft. E. of small dike, top of buried rock 2179.547

Ajo, 22 mi. E. of along State Highway 86 to junction of gravel rd.,
thence 7 mi. N. to prominent knoll on W. side of rd., about 300 ft.
S. of large drain crossing, 32 ft. W. of center of rd., concrete
post projecting 6 in.; standard tablet stamped "5 LC 1961 2205" 2204.936

Reference mark, 70 ft. E. of tablet, 2 ft. S. of cairn, rock in
place; chiseled square 2203.346

1.06 mi. N. of BM "5 LC 1961", to the P.I. of a curve opposite a
long dark ridge, 50 ft. NW. of center of rd., buried boulder;
chiseled square 2227.141

Ajo, 22 mi. E. of along State Highway 86 to junction of gravel rd.,
thence 9 mi. NNE., 4.6 mi. SW. of Hickiwan, 36 ft. SE. of center
of rd., 15 ft. NE. of center of large bush, a concrete post pro-
jecting 4 in.; standard tablet stamped "6 LC 1961 2192" 2192.332

Reference mark, 93 ft. SW. of tablet, 40 ft. SE. of center of rd.,
buried rock; chiseled square 2193.069

0.8 mi. NE. of BM "6 LC 1961" to prominent overflow area, 55 ft. SE.
of center of rd., and 1 ft. higher, buried boulder; chiseled square 2178.884

POZO REDONDO (77)

Arizona

L.R. Curtis, 1961

Third Order

Adjusted Elevations Based
On Sea Level Datum of 1929
And Suppl. Adj. of 1958

Book: PV 444

- (4) Ajo, 22 mi. E. of along State Highway 86 to junction of gravel rd.,
thence N. 10.8 mi. to small rise, 500 ft. SE. of drain crossing,
(Hickiwan 3 mi. SW. of); 55 ft. SE. and 4 ft. higher, center of
rd., concrete post, projecting 5 in.; standard tablet stamped
"7 LC 1961 2194"

2193.592

Reference mark, 110 ft. W. of tablet, 40 ft. W. and 3 ft. higher,
center of rd., rock in place; chiseled square

2192.601

1.04 mi., NE. of BM "7 LC 1961", 45 ft. SE. of center of rd., buried
rock; chiseled square

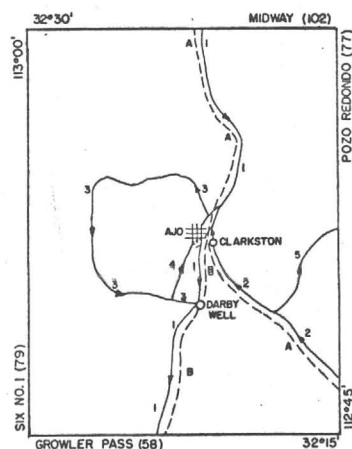
2189.957

Pima County

Edition of 4/29/57

Preliminary adjusted elevations to be readjusted when final adjusted elevations are available for USC&GS lines in this area.

Only the standard tablets are listed for lines run more than 25 years before the above edition date



USC&GS Leveling Lines

- A. Gila Bend to Lukeville, Arizona (No. 77)
First order
- B. Ajo-Mexican Border Area (No. 76)
Second order

LINE 1.

FROM MIDWAY QUADRANGLE (102) SOUTH ALONG TUCSON CORNELIA & GILA BEND RAILROAD TO AJO THENCE SOUTH ALONG ROAD VIA DARBY WELL INTO GROWLER PASS QUADRANGLE (58) (by J. G. Ransom, 1930; Book B 4054)

Ajo, 7.6 mi. N. of station along Tucson Cornelia & Gila Bend Railroad; 54 ft. NE. of milepost 36; 0.1 mi. NW. of wooden bridge 361; 41 ft. SW. of SW. rail; in concrete post; standard tablet stamped "R 12 1930" (Recovered by USC&GS, 1953) 1381.795

Ajo, 4.7 mi. N. of station along Tucson Cornelia & Gila Bend Railroad; 0.1 mi. N. of milepost 39; 159 ft. SE. of 4-ft. metal tank; 137 ft. SE. of sign "STATION 1 MILE"; 58 ft. E. of E. rail; 26 ft. E. of dirt rd.; 9 ft. S. of power pole; in line with row of poles; in concrete post; standard tablet stamped "R 13 1930" (Recovered by USC&GS, 1953) 1471.795

Ajo, 1.8 mi. N. of station along Tucson Cornelia & Gila Bend Railroad; 176 ft. E. of E. rail; 48 ft. S. of power line pole 39; 33 ft. E. of center of dirt rd.; in W. side of N. concrete pier of The Westerly Pipe Line; standard tablet stamped "R 14 1930" (Recovered by USC&GS, 1953) 1640.266

Ajo, 0.2 mi. SE. of station along Tucson Cornelia & Gila Bend Railroad; 139 ft. S. of center of State Highway and concrete culvert; 71 ft. NW. of center of gate in fence around copper mill; 32 ft. NE. of NE. rail; in NW. end of NE. concrete culvert head wall; standard tablet stamped "R 15 1930" (Recovered by USC&GS, 1953) 1750.528

Clarkston, 1.9 mi. SE. of; 2.3 mi. SE. of station at Ajo; 0.6 mi. S. of rd. jct.; 5 ft. S. of rd.; top of center screw of U. S. Mineral Survey plate on top of iron pipe; stamped USMS 3488 4 M F L W R 4" 1743.869

Clarkston, 2.5 mi. S. of; 10 ft. N. of customs sign in rd. fork; in concrete post; standard tablet stamped "R 16 1930" (Reported not found USC&GS, 1952) 1773.318

Clarkston, 3.0 mi. S. of; about 400 ft. S. of large prospect workings; 260 ft. N. of "HOTEL LYONS" sign board; 90 ft. E. of rd.; 3 ft. S. of 4x4-in. post; U. S. Mineral Survey post No. 3881; stamped on edges of square tablet "2 C R 4 2 C R 5 3 C R 6 and 3 C R 7" 1796.467

Darby Well, 1.8 mi. S. of; 60 ft. S. of rd. intersection; 8 ft. E. of old rd.; in concrete post; standard tablet stamped "R 17 1930" 1813.510

Darby Well, 3.4 mi. S. of; at W. edge of old rd.; in pile of white rocks; tablet on iron pipe stamped "S W C 23 N W C 24 S E C 7 and N E C 6" 1748.478

Darby Well, 3.6 mi. S. of; 5 ft. W. of old rd.; in pile of white rocks; tablet on iron pipe stamped "S W C E X A N W C E X D" 1739.006

Darby Well, 4.5 mi. S. of; 29 ft. NW. of new rd.; 12 ft. SE. of old rd.; in concrete post; standard tablet stamped "R 18 1930" 1696.745

LINE 2.

FROM POZO REDONDO QUADRANGLE (77) NORTHWEST ALONG ROAD TO POINT 1.3 MILES SOUTHEAST OF CLARKSTON (by J. G. Ransom, 1930; Book B 4054)

Clarkston, 8.1 mi. SE. of; 257 ft. NW. of center of dip in hwy.; 44 ft. SW. of hwy.; in concrete post; standard tablet stamped "R 27 1930" 1742.579

Clarkston, 5.0 mi. SE. of; at small bridge with iron railing; 12 ft. SW. of hwy.; in S. end of SE. abutment; standard tablet stamped "R 28 1930" 1626.601

Clarkston, 3.1 mi. SE. of; 290 ft. SE. of intersection of rd. to Childs Well; in NE. head wall of hwy. culvert; standard tablet stamped "R 29 1930" (Reported not found USC&GS 1954) 1674.304

LINE 3.

FROM AJO NORTHWEST ALONG ROAD THENCE SOUTHWEST TO DARBY WELL (by J. G. Ransom, 1930; Book B 4054)

Ajo, 0.2 mi. SE. of; standard tablet stamped "R 15 1930" (Described in Line 1) 1750.528

Gibson, 2.0 mi. W. of; 150 ft. SE. of intersection of old rd. to W.; 15 ft. NE. of rd.; in concrete post; standard tablet stamped "R 30 1930" 1674.578

Gibson, 5.0 mi. W. of; 60 ft. N. of 4x4-in. post which is corner of mining claims; 30 ft. S. of rd.; in concrete post; standard tablet stamped "R 31 1930" 1615.257

Gibson, 8.0 mi. W. of; 15 ft. S. of rd.; in concrete post; standard tablet stamped "R 32 1930" 1702.836

Darby Well, 3.8 mi. W. of; 11.0 mi. W. of Gibson; on point of ridge; 40 ft. N. of rd.; in concrete post; standard tablet stamped "R 33 1930" 1993.243

Darby Well, 1.4 mi. W. of; 3.0 mi. S. of Ajo; in triangle formed by intersection of rds.; 30 ft. E. of "ROAD CLOSED" sign; in concrete post; standard tablet stamped "R 34 1930" 1890.467

LINE 4.

FROM A POINT 1.4 MILES WEST OF DARBY WELL NORTH ALONG ROAD TO POINT 0.2 MILE SOUTHEAST OF AJO (by J. G. Ransom, 1930; Book B 4055)

No permanent marks fall on this quadrangle.

LINE 5.

FROM POINT 3.1 MILES SOUTHEAST OF CLARKSTON NORTHEAST ALONG ROAD INTO POZO REDONDO QUADRANGLE (77) (by J. G. Ransom, 1930; Book B 4055)

Clarkston, 3.1 mi. SE. of; standard tablet stamped "R 29 1930" (Described in Line 2) 1674.304

Childs Ranch, 1.5 mi. NE. of; 25 ft. S. of rd.; in concrete post; standard tablet stamped "R 36 1930" 1611.774

POZO REDONDO (77)

Arizona

R.R. Moore, 1962

Third Order

Adjusted Elevations Based
On Sea Level Datum of 1929
And Suppl. Adj. of 1958

Book: PV 444

Latitude 32°15' Longitude 112°30'

- (5) FROM A POINT 7 MILES NORTHEAST OF AJO SOUTHEAST TO A POINT
NORTH OF HOTASON VO THENCE NORTHEAST TO "Y" JUNCTION

"G 336 1961" (USC&GS)	1699.885
Picture point "4-138 B"	1690.728
0.97 mi. S. of BM "G 336", 100 ft. S. of E.-W. wash, middle of large mesquite grove, buried boulder; chiseled square	1670.811
Childs Ranch, 3 mi. NE. of, 50 ft. SE. of center of dim rd., buried boulder; chiseled square	1682.035
"R 37 1930" (Described in Line 2)	1703.250
1.03 mi. E. of BM "R 37", 30 ft. N. of center of dim rd., 25 ft. S. of drainage ditch, buried boulder; chiseled square	1740.440
Childs Ranch, 6.2 mi. NE. of, 18 ft. S. and 2 ft. higher than center of rd., 21 ft. W. of drain, 100 ft. S. of large palo verde tree, concrete post projecting 4 in.; standard tablet stamped "29 RRM 1962 1767"	1767.036
Reference mark	1766.094
0.84 mi. NE. of BM "29 RRM", top of square headed bolt projecting 1.5 in., at base of windmill pump	1796.117
0.45 mi. from windmill, 1.29 mi. NE. of BM "29 RRM", 100 ft. W. of gate at Indian reservation fence	1806.561
Childs Ranch, 8.3 mi. NE. of, 24 ft. E. and 1 ft. higher than center of rd., 40 ft. E. of mesquite bush, concrete post projecting 3 in.; standard tablet stamped "30 RRM 1962"	1827.611
Reference mark, 91 ft. W. of tablet, buried boulder; chiseled square	1826.756
0.53 mi. S. of BM "30 RRM", 70 ft. W. of large wash, buried boulder; chiseled square	1845.350

POZO REDONDO (77)

Arizona

R.R. Moore, 1962

Third Order

Adjusted Elevations Based
On Sea Level Datum of 1929
And Suppl. Adj. of 1958

Book: PV 444

- (5) Sikort Chuapo, 1.39 mi. N. of, 20 ft. E. of dim rd., 25 ft. S. of low mesquite bush, concrete post projecting 4 in.; standard tablet stamped "31 RRM 1962 1868" 1868.424
- Reference mark, 53 ft. N. of tablet, 6 ft. E. of rd., buried boulder; chiseled square 1867.960
- Sikort Chuapo, 1.1 mi. N. of, 15 ft. E. of rd., on 4 x 4 post (Not copper nail and washer) (Old post by Ransom, 1930) 1871.701
- 0.96 mi. S. of BM "31 RRM 1962", 20 ft. E. of rd., buried boulder; chiseled square 1890.804
- "R 39 1930" (Described in Line 2) 1904.080
- Standard azimuth tablet stamped "POZO 1936" projecting 4 in. above ground; (described in Special Publication 224, Arizona, page 141) 1969.384
- 1 mi. S. of Pozo Azimuth Mark, 20 ft. N. of small wash, buried boulder; chiseled square 1998.195
- "R 40 1930" (Described in Line 2) 2014.180
- 1.04 mi. S. of BM "R 40 1930", 12 ft. E. of and 1 ft. higher than center of rd., buried boulder; chiseled square 2022.429
- "R 41 1930" (Described in Line 2) 2070.856
- Reference mark, 28 ft. N. of BM "R 41 1930", in large rock; chiseled square 2073.628
- 1.01 mi. E. of BM "R 41 1930", 0.2 mi. E. of Hotason Vo, 0.20 ft. higher than center of Y-rd. junction, buried boulder; chiseled square (Mark is set between rds. at Y-junction) 2091.077

POZO REDONDO (77)

Arizona

R.R. Moore, 1962

Third Order

Adjusted Elevations Based
On Sea Level Datum of 1929
And Suppl. Adj. of 1958

Book: PV 444

Latitude 32°15' Longitude 112°30'

(6) FROM Y-JUNCTION SOUTHWEST TO A POINT NEAR HOTASON VO

Picture point LC, 0.25 mi. E. of SEM, at Y-junction

2097.533

1.86 mi. E. of BM "R 41 1930", 0.9 mi. E. of Hotason Vo, 23 ft. S.
of center of dirt rd., 25 ft. NW. of lone mesquite tree, buried
rock; chiseled square

2103.444

Picture point LC

2119.532

"3 LC 1961"

2111.040

12/4/63 dw ✓

POZO REDONDO (77)

Arizona

R.R. Moore, 1962

Third Order

Adjusted Elevations Based
On Sea Level Datum of 1929
And Suppl. Adj. of 1958

Book: PV 444

Latitude 32°15'

Longitude 112°30'

(7) A CHECKED SPUR FROM BM "5 LC 1961" to BM "R 43 1930"

"5 LC 1961"

2204.936

"R 43 1930" (Described in Line 2)

2204.357

12/4/63 dw

POZO REDONDO (77)

Arizona

R.R. Moore, 1962

Third Order

Adjusted Elevations Based
On Sea Level Datum of 1929
And Suppl. Adj. of 1958

Book: PV 444

Latitude 32°15' Longitude 112°30'

- (8) FROM A POINT 0.3 MILE EAST OF CHARCO DE LA PIETRA SOUTH TO
BM "4 LC 1961"

Note: Follows same route by Ransom, 1930.

SBM 2091.077

1.01 mi. NE. of SBM at Y-rd. junction, 30 ft. S. from center of
dim rd., 250 ft. N. of two large twin cactus, buried rock; chiseled
square 2104.063

"R 42 1930" (Described in Line 2) 2150.392

Reference mark 2148.190

0.92 mi. NE. of BM "R 42 1930", 10 ft. S. from center of dim rd.,
80 ft. E. of drain, 110 ft. N. of lone large cactus, top of Ransom's
old 4 x 4 post 2180.322

"4 LC 1961" 2176.715

12/4/63 dw

TONOCA (57)

Arizona

L.R. Curtis, 1961

Third Order

Field Elevations

Book: PV 444

Lat.: 32°00'

Long. 112°30'

(3)

FROM USC&GS BM A 37, 22 MILES SOUTHEAST OF AJO ON STATE HIGHWAY 86,
NORTH INTO SOUTH EDGE OF POZO REDONDO QUADRANGLE (77)

- 0.99 RM, "1 LC 1961", 70 ft. E. of tablet, 80 ft. N. of centerline of Highway 86, drill hole in top of buried rock 2173.764
- 1.00 BM, "1 LC 1961", Ajo, 22 mi. E. of along State Highway 86, at junction of gravel rd. N. to Hickiwan, 75 ft. N. of centerline of Highway 86, 40 ft. W. of center of gravel rd., in concrete post, projecting 4 in.; standard tablet stamped "1 LC 1961 2173" 2173.411 ✓
- 2.10 SBM, 1.09 mi. N. of BM "1 LC 1961", 30 ft. E. of center of gravel rd., 48 ft. N. of an ironwood tree, top of buried boulder projecting 4 in. 2138.546
- 2.81 RM, "2 LC 1961", 80 ft. S. of tablet, top of buried boulder projecting 6 in. above ground 2116.746
- 2.82 BM, "2 LC 1961", Ajo 22 mi. E. of along State Highway 86, to junction of gravel rd., thence 1.81 mi. N. of, 30 ft. E. of center of rd., 17 ft. NW. of telephone pole, concrete post projecting 2 in.; standard tablet stamped "2 LC 1961 2116" 2115.953 ✓
- Tie Point - Quad 77*
- 3.88 RM, "3 LC 1961", 132 ft. SE. of tablet, 30 ft. E. of N.-S. rd., top of buried boulder projecting 7 in. 2109.351
- 3.91 BM, "3 LC 1961", Ajo, 22 mi. E. of along State Highway 86, to junction of gravel rd., thence 2.9 mi. N. to "Y" junction, 30 ft. W. of N.-S. rd., 34 ft. NE. of NW.-SE. rd. at S. edge of brush line in triangle, concrete post projecting 6 in., stamped "3 LC 1961 2111" 2111.028 ✓

2/7/62 vrm. lcl

FILE COPY

TONOCA (57)

Arizona

L.R. Curtis, 1961

Third Order

Field Elevations

Book: PV 444

Latitude 32°00' Longitude 112°30'

(4) FROM USC&GS BM "J-338 1961" AT KERWO EAST ALONG ROAD INTO WEST EDGE OF QUIJOTOA NO. 3 QUADRANGLE (56)

0.00 USC&GS BM "J-338 1961"

2166.391 ✓

1.01 SBM, 1 mi. NE. of BM "J-338", 44 ft. N. of center of gravel rd., 13 ft. W. of center of dirt X-rd., buried rock; chiseled square

2152.799

2.10 BM, Ajo, 15.9 mi. E. of along State Highway 86 thence 12.3 mi. S. along graveled rd. to a T-jct. at Kerwo, thence 2.1 mi. easterly along graveled rd. toward Pisinimo to a track rd. S., 43 ft. N. and 1 ft. lower than center of main rd., 9 ft. W. of trail, concrete post projecting 8 in.; standard tablet stamped "13 LC 1961 2114"

2114.184 ✓

2.08 RM, 106 ft. SW. of tablet, 52 ft. S. and 2 ft. higher than center of rd., 48 ft. NW. of center of side rd., buried rock; chiseled point

2116.293

3.22 SBM, 1.13 mi. E. of BM, "13 LC", 38 ft. N. of center of rd., 10 ft. S. of creasote bush, buried rock; chiseled square

2076.930

4.20 BM, Ajo, 15.9 mi. SE. of along State Highway 86 thence 12.3 mi. S. along graveled rd. to a T-jct. at Kerwo, thence 4.2 mi. easterly along graveled rd. toward Pisinimo to a T-rd. S., 50 ft. N. and 1 ft. lower than center of rd., in line with side rd., concrete post projecting 8 in.; standard tablet stamped "14 LC 1961"

2046.569 ✓

4.18 RM, 107 ft. SE. of tablet, 50 ft. S. of center of rd., 36 ft. E. of center of side rd., buried rock; chiseled square

2045.737

2/16/62 lcl *lrm*

U. S. DEPARTMENT OF COMMERCE

COAST AND GEODETIC SURVEY
Second-order leveling11.6 Mi. SE of Ajo to Tucson, Arizona

The adjusted elevations in this list are based on the Sea-level Datum of 1929 and are derived from the original leveling of 1933 and the releveling of 1951 and 1952.

These elevations SUPERSEDE those previously published.

<u>Bench Mark</u>	<u>Adjusted Elevation</u>		<u>Bench Mark</u>	<u>Adjusted Elevation</u>	
	(Meters)	(Feet)		(Meters)	(Feet)
1837.7 (USGLO)	560.055	1837.447	V 37	731.556	2400.113
** V 36	573.712	1882.253	W 37	754.358	2474.923
** L 309	593.083	1945.806	X 37	764.202	2507.219
** W 36	600.870	1971.354	Z 37	746.768	2450.021
** EFS No. 39		1969.8	A 38	740.190	2428.440
** EFS No. 40		1984.2	B 38	731.640	2400.389
** M 309	605.693	1987.178	C 38	719.378	2360.159
X 36	620.421	2035.498	D 38	735.214	2412.115
Y 36	646.948	2122.529	E 38	761.945	2499.815
Z 36	655.253	2149.776	1473+49.2 (ASHD)	765.174	2510.408
A 37	663.128	2175.612	T 118	779.263	2556.632
B 37	647.975	2125.898	1384+80.5 (ASHD)	783.420	2570.270
C 37	628.518	2062.063	F 38	789.197	2589.224
D 37	608.179	1995.334	1354+20.9 (ASHD) (No elevation available)		
E 37	596.993	1958.635	G 38	810.908	2660.454
F 37	589.986	1935.646	H 38	829.960	2722.960
G 37	596.014	1955.423	J 38	870.820	2857.015
H 37	621.858	2040.212	K 38	914.792	3001.280
J 37	656.381	2153.477	876+1240 (ASHD) (No elevation available)		
K 37	701.696	2302.148	L 38	915.448	3003.432
L 37	749.068	2457.567	M 38	959.027	3146.408
M 37	815.362	2675.067	N 38	933.834	3063.754
N 37	812.496	2665.664	P 38	930.869	3054.026
P 37	767.447	2517.866	R 38	915.175	3002.537
R 37	730.813	2397.676	S 38	884.571	2902.130
S 37	689.148	2260.980	T 38	876.200	2874.666
T 37	652.899	2142.053	U 38	842.891	2765.385
Y 37	670.638	2200.251	V 38	819.812	2689.667
U 37	702.311	2304.165	W 38	805.722	2643.440

<u>Bench Mark</u>	<u>Adjusted Elevation</u>		<u>Bench Mark</u>	<u>Adjusted Elevation</u>	
	(Meters)	(Feet)		(Meters)	(Feet)
3 (ASHD)	790.406	2593.190	C 296	740.009	2427.846
2 (ASHD)	783.773	2571.429	EFS No. 132		2426.4
X 38 RESET	781.946	2565.434			
1 (ASHD)	781.566	2564.188	<u>Spur line through Ryan Airport</u>		
Y 296	774.419	2540.740	V 296	736.439	2416.134
Y 38 RESET		*2527.446	U 296	734.531	2409.874
X 296	771.607	2531.514	T 296	728.040	2388.578
268+15 (ASHD)	771.277	2530.431			
A 113	773.898	2539.030	<u>Ryan Airport high point</u>		
			EFS No. 131		2412.8
R.M. 1 A 113	773.928	2539.129			
R.M. 2 A 113	774.108	2539.719	<u>End of the spur line.</u>		
343+14 (ASHD)	772.598	2534.765			
Z 38 RESET	772.142	2533.269	795+00 (ASHD)	739.054	2424.713
			B 296	738.676	2423.473
367+99.25 (ASHD)	771.935	2532.590	E 39 RESET	738.470	2422.797
395+86.67 (ASHD)	769.256	2523.801	913+52 (ASHD)	739.494	2426.157
405+35 (ASHD)	768.765	2522.190			
443+83 (ASHD)	764.786	2509.135	EFS No. 133		2429.7
			A 296	744.840	2443.696
A 39 RESET	763.571	2505.149	EFS No. 134		2468.0
465+40.25 (ASHD)	762.364	2501.189	F 39	755.977	2480.235
491+31.25	759.264	2491.019			
540+60 (ASHD)	754.291	2474.703	Snyder Hill		
			(Ariz.Geod.S.)	799.932	2624.444
549+60 (ASHD)	753.470	2472.009	R.M. 1 Snyder Hill		
B 39 RESET	752.279	2468.102	(Ariz.Geod.S.)	796.852	2614.339
562+40 (ASHD)	752.524	2468.906	R.M. 2 Snyder Hill		
594+10 (ASHD)	749.670	2459.542	(Ariz.Geod.S.)	798.809	2620.759
607+00 (ASHD)	748.175	2454.637			
			Azimuth Mark Snyder Hill		
EFS No. 129		2452.8	(Ariz.Geod.S.)	792.982	2601.642
631+07 (ASHD)	746.361	2448.686	W 296	767.190	2517.022
649+60 (ASHD)	744.826	2443.650	G 39 (New Elev.)	778.592	2554.431
654+55 (ASHD)	744.043	2441.081			
			R 112 RESET	787.488	2583.617
C 39 RESET	742.839	2437.131	1218+10 (ASHD)	806.840	2647.108
667+05 (ASHD)	743.021	2437.728	H 39	808.940	2653.997
701+95 (ASHD)	740.901	2430.773	J 39	762.462	2501.511
713+45 (ASHD)	740.395	2429.113			
			K 39	728.000	2388.447
EFS No. 135		2414.0	L 39	717.471	2353.903
D 296	739.175	2425.110			
EFS No. 130		2425.1	Tucson (1933)	719.898	2361.865
D 39 RESET		*2423.383			

* 1935 elevation.

*** Elevation derived from the 1951 leveling.

15 Ariz.

April 14, 1954

UNITED STATES COAST AND GEODETIC SURVEY
Second-order leveling

11.6 Mi. SE of Ajo to Tucson, Arizona

The standard (adjusted) elevations in this list are based on the Sea-level Datum of 1929. (Elevations derived from the 1933 leveling unless otherwise noted.)

The preliminary elevations in this list are unadjusted and subject to correction. (Elevations derived from the 1951 and 1952 leveling.)

<u>B.M.</u>	<u>Preliminary Office Elevation (Meters)</u>	<u>Adjusted Elevation</u> (Meters) (Feet)	
* R 26 (USGS)	548.6327	548.728	1800.285
1837.7 (USGLO)		560.134	1837.706
** V 36	573.8017	573.790	1882.509
** L 309	593.1677		
** W 36	600.9499	600.951	1971.620
** EFS No. 39	600.48		
** EFS No. 40	604.87		
** M 309	605.7727		
X 36		620.499	2035.754
Y 36		647.025	2122.781
Z 36		655.327	2150.019
A 37		663.201	2175.852
B 37		648.045	2126.128
C 37		628.586	2062.286
D 37		608.244	1995.547
E 37		597.056	1958.841
F 37		590.048	1935.849
G 37		596.072	1955.613
H 37		621.915	2040.399
J 37		656.435	2153.654
K 37		701.747	2302.315
L 37		749.118	2457.731
M 37		815.409	2675.221
N 37		812.541	2665.812
P 37		767.489	2518.003
R 37		730.855	2397.813
S 37		689.190	2261.118
T 37		652.941	2142.191
Y 37		670.680	2200.389
U 37		702.352	2304.300

* Tie mark to Line 77 Ariz. (Preliminary elevation is a 1953 field elevation)

** Tie marks to Line 76 Ariz.

B.M.	Preliminary Office Elevation		Adjusted Elevation	
	(Meters)		(Meters)	(Feet)
V 37			731.596	2400.245
W 37			754.399	2475.057
X 37			764.242	2507.351
Z 37			746.808	2450.153
A 38			740.229	2428.568
B 38			731.679	2400.517
C 38			719.417	2360.287
D 38			735.252	2412.239
E 38		761.9896	761.984	2499.942
1473+49.2 (ASHD)		765.2175		
T 118		779.3043		
1384+80.5 (ASHD)		783.4625		
F 38		789.2390	789.239	2589.362
1354+20.9 (ASHD)	(Not leveled over)		(No elevation available)	
G 38	(Not leveled over)		810.950	2660.592
H 38	(Not leveled over)		830.002	2723.098
J 38			870.863	2857.156
K 38			914.838	3001.431
876+1240 (ASHD)	(Not leveled over)		(No elevation available)	
L 38	(Not leveled over)		915.497	3003.593
M 38			959.080	3146.582
N 38			933.890	3063.937
P 38			930.929	3054.223
R 38			915.239	3002.747
S 38			884.639	2902.353
T 38			876.272	2874.902
U 38			842.966	2765.631
V 38			819.892	2689.929
W 38		805.7989	805.805	2643.712
3 (ASHD)		790.4818		
2 (ASHD)		783.8474		
X 38 (RESET)		782.0209		
1 (ASHD)		781.6409		
Y 296		774.4928		
Y 38 (RESET)	(Not leveled over)		* 2527.446	
X 296		771.6803		
268+15 (ASHD)		771.3493		
A 113		773.9685		
R.M. 1 A 113		773.9985		
R.M. 2 A 113		774.1795		

* 1935 elevation.

B.M.	Preliminary Office Elevation		Adjusted Elevation	
	(Meters)		(Meters)	(Feet)
343+14 (ASHD)	772.6689			
Z 38 RESET	772.2126			
367+99.25 (ASHD)	772.0065			
395+86.67 (ASHD)	769.3280			
405+35 (ASHD)	768.8367			
443+83 (ASHD)	764.8584			
A 39 RESET	763.6437			
465+40.25 (ASHD)	762.4376			
491+31.25 (ASHD)	759.3376			
540+60 (ASHD)	754.3654			
549+60 (ASHD)	753.5447			
B 39 RESET	752.3541	2468.35		
562+40 (ASHD)	752.5988			
594+10 (ASHD)	749.7456			
607+00 (ASHD)	748.2509			
EFS No. 129	747.69			
631+07 (ASHD)	746.4374			
649+60 (ASHD)	744.9029			
654+55 (ASHD)	744.1196			
C 39 RESET	742.9159			
667+05 (ASHD)	743.0975			
701+95 (ASHD)	740.9783			
713+45 (ASHD)	740.4719			
EFS No. 135	735.87			
D 296	739.2525	2425.36		
EFS No. 130	739.26			
D 39 RESET	(Not leveled over)		* 2423.383	
C 296	740.0867	2428.10		
EFS No. 132	739.63			

Spur line through Ryan Airport

V 296	736.5170
U 296	734.6089
T 296	728.1174

Ryan Airport high
point EFS No. 131

735.49

End of the spur line.

795+00 (ASHD)	739.1325
B 296	738.7542
E 39 RESET	738.5494
913+52 (ASHD)	739.5737
EFS No. 133	740.65

2423.73

* 1935 elevation.

<u>B.M.</u>	<u>Preliminary Office Elevation</u>		<u>Adjusted Elevation</u>	
	(Meters)		(Meters)	(Feet)
A 296	744.9203	2443.96		
EFS No. 134	752.33			
F 39	756.0580		756.058	2480.500
Snyder Hill (Ariz.Geod.S.)	800.0131			
R.M. 1 Snyder Hill (Ariz.Geod.S.)	796.9337			
R.M. 2 Snyder Hill (Ariz.Geod.S.)	798.8901			
Azimuth Mark Snyder Hill (Ariz.Geod.S.)	793.0637			
W 296	767.2005	2517.05		
G 39	778.6015		778.682	2554.726
R 112 RESET	787.4969	2583.64		
1218+10 (ASHD)	806.8493			
H 39	808.9498		809.022	2654.266
J 39			762.543	2501.776
K 39			728.081	2388.712
L 39			717.545	2354.146
TUCSON			* 719.898	2361.865

* Elevation derived from
the 1951 leveling.

June 7, 1954

UNITED STATES COAST AND GEODETIC SURVEY
Second-order leveling11.6 MI. SE of Ajo to Tucson, Arizona

This line follows State Highway 86 from a point 11.6 miles southeast of Ajo through Sells to Tucson. The original field work was done in November 1933 by a party under the supervision of Gilbert R. Fish. The portion of the line from a point 3.8 miles east of Sells to a point 15.6 miles northeast of Sells was relevelled in January 1952 by a party under the supervision of J.R. Flaggner; and the portion of the line from a point 26.9 miles southwest of Tucson to a point 4.8 miles southwest of Tucson was relevelled in December 1951 by the same party.

This list SUPERSEDES a lithographed list entitled "Gila Bend to Tucson, Arizona" dated April 2, 1941, and contains additional data from the releveling of 1951-52, and from reports received since that list was issued.

The descriptions and elevations of bench marks on the original line between Gila Bend and a point 11.6 miles southeast of Ajo, are now published on "Gila Bend to Lukeville, Arizona" (77 Ariz.).

1837.7 (U.S.G.L.O.)--- 12.8 miles southeast of Ajo, Pima County. This bench mark may be reached from the Tucson, Cornelia & Gila Bend Railroad station by going 0.2 mile southeast along the track, thence 12.6 miles southeast along State Highway 86. It is at the western boundary of the Papago Indian Reservation, 82 feet north of the center line of the highway, and in the fence line. A United States General Land Office standard cap, stamped "S1 S6 S31 S36 T13S T14S R4W R5W PR" and riveted on the top of a 3-inch iron pipe projecting 8 inches above ground.

V 36--- 13.7 miles southeast of Ajo, Pima County. This bench mark may be reached from the Tucson, Cornelia & Gila Bend Railroad station by going 0.2 mile southeast along the track, thence 13.5 miles southeast along State Highway 86. It is 0.9 mile southeast of the west boundary of the Papago Indian Reservation, 195.5 feet northwest of a concrete-protected dip in the highway, 40 feet southwest of the center line of the highway, 1.0 foot north of a white wooden witness post, and about 1 foot higher than the highway. A standard disk, stamped "1882.509 V 36 1933" and set in the top of a concrete post projecting 0.9 foot above ground.

L 309--- 14.7 miles southeast of Ajo, Pima County. This bench mark may be reached from the Tucson, Cornelia & Gila Bend Railroad station by going 0.2 mile southeast along the track, thence 14.5 miles southeast along State Highway 86. It is 1.0 mile northwest of the T-junction of Gunsight Road leading south-east and south, 103.5 feet southwest of the center of a small wash, 60 feet northeast of the center line of the highway, 2 feet south of a white wooden witness post, and about 1-1/2 feet higher than the highway. A standard disk, stamped "L 309 1952" and set in the top of a concrete post projecting 0.4 foot above ground.

W 36--- 15.7 miles southeast of Ajo, Pima County. This bench mark may be reached from the Tucson, Cornelia & Gila Bend Railroad station by going 0.2 mile southeast along the track, thence 15.5 miles southeast along State Highway 86. It is at the T-junction of Gunsight Road leading southeast and south, 36.5 feet south of the center line of the highway, 11.5 feet southwest of the center line of Gunsight Road, 2.2 feet north of a white wooden witness post, and about 1-1/2 feet higher than the road. A standard disk, stamped "1971.620 W 36 1933" and set in the top of a concrete post projecting 1 foot above ground.

EFS No. 39--- 15.7 miles southeast along State Highway 86 from the Tucson, Cornelia & Gila Bend Railroad station at Ajo, highway surface at the center of the T-junction of Gunsight Road leading southeast.

EFS No. 40--- 16.3 miles southeast along State Highway 86 from the Tucson, Cornelia & Gila Bend Railroad station at Ajo, center line of the highway at the northwest end of a bridge over a wash.

M 309--- 16.5 miles southeast of Ajo, Pima County. This bench mark may be reached from the Tucson, Cornelia & Gila Bend Railroad station by going 0.2 mile southeast along the track, thence 16.3 miles southeast along State Highway 86. It is at the point where the road crosses a wash, at the intersection of a north-and-south road (the road leads south to Kerwood), 287 feet south of the center line of the highway, 54 feet west of the center line of the road, 2.1 feet east of a white wooden witness post, and level with the road. A standard disk, stamped "M 309 1952" and set in the top of a concrete post projecting 0.3 foot above ground.

For additional bench marks in this locality, see "Ajo-Mexican Border Area, Arizona--line 5 (76 Ariz.)."

X 36--- 17.6 miles southeast along State Highway 86 from the Tucson, Cornelia & Gila Bend Railroad station at Ajo, Pima County, on the old Ajo-Tucson highway, 0.4 mile east of a small concrete bridge with an iron railing, and 36 feet south of the center line of the highway. A standard disk, stamped "2035.754 X 36 1933" and set in the top of a concrete post projecting 1 foot above ground.

Y 36--- 19.7 miles southeast along State Highway 86 from the Tucson, Cornelia & Gila Bend Railroad station at Ajo, Pima County, on the old Ajo-Tucson highway, 200 feet east of the crest of a rounded ridge, at the junction of a road leading south, 66 feet east of the center line of the road, and 31 feet south of the center line of the highway. A standard disk, stamped "2122.781 Y 36 1933" and set in the top of a concrete post projecting 10 inches above ground.

Z 36--- 21.7 miles southeast along State Highway 86 from the Tucson, Cornelia & Gila Bend Railroad station at Ajo, Pima County,

on the old Ajo-Tucson highway, 0.2 mile east of the junction of a road leading to Indian Wells, 180 feet west of a dip in the highway with masses of broken concrete nearby, and 58 feet north of the center line of the highway. A standard disk, stamped "2150.019 Z 36 1933" and set in the top of a concrete post projecting 1 foot above ground.

A 37--- 23.6 miles southeast along State Highway 86 from the Tucson, Cornelia & Gila Bend Railroad station at Ajo, Pima County, on the old Ajo-Tucson highway, 50 feet west of the west end of a wide ditch paralleling the highway, and 45 feet south of the center line of the highway. A standard disk, stamped "2175.852 A 37 1933" and set in the top of a concrete post projecting 6 inches above ground.

B 37--- 25.4 miles southeast along State Highway 86 from the Tucson, Cornelia & Gila Bend Railroad station at Ajo, Pima County, on the old Ajo-Tucson highway, 0.5 mile east of a dark lava hill with a prominent bald knob, 180 feet west of the first dip in the highway east of the hill, 42 feet south of the center line of the highway, in a shallow borrow pit, in the top of a lime-cemented conglomerate outcrop, and flush with the ground. A standard disk, stamped "2126.128 B 37 1933."

C 37--- 27.6 miles east along State Highway 86 from the Tucson, Cornelia & Gila Bend Railroad station at Ajo, Pima County, on the old Ajo-Tucson highway, 0.3 mile east of a dip in the highway, and 48 feet north of the center line of the highway. A standard disk, stamped "2062.266 C 37 1933" and set in the top of a concrete post projecting 1 foot above ground.

D 37--- 29.6 miles east along State Highway 86 from the Tucson, Cornelia & Gila Bend Railroad station at Ajo, Pima County, on the old Ajo-Tucson highway, 0.1 mile east of a dip in the highway, and 52 feet north of the center line of the highway. A standard disk, stamped "1955.547 D 37 1933" and set in the top of a concrete post projecting 1 foot above ground.

E 37--- 31.5 miles east along State Highway 86 from the Tucson, Cornelia & Gila Bend Railroad station at Ajo, Pima County, on the old Ajo-Tucson highway, 500 feet east of a dip across an arroyo with exceptionally high mesquite, and 54 feet south of the center line of the highway. A standard disk, stamped "1958.841 E 37 1933" and set in the top of a concrete post projecting 1 foot above ground.

F 37--- 33.5 miles east along State Highway 86 from the Tucson, Cornelia & Gila Bend Railroad station at Ajo, Pima County, 9.2 miles west of Pozo Blanco, on the old Ajo-Tucson highway, 1.1 mile west of the Tracy Trading Post at San Simeon Well, 180 feet east of a dip in the highway, and 46 feet south of the center line of the highway. A standard disk, stamped "1935.849 F 37 1933" and set in the top of a concrete post projecting 10 inches above ground.

G 37--- 7.3 miles west along State Highway 86 from Pozo Blanco, Pima County, on the old Ajo-Tucson highway, 0.3 mile east of the Tracy Trading Post at San Simeon Well, and 43 feet south of the center line of the highway. A standard disk, stamped "1955.613 G 37 1933" and set in the top of a concrete post projecting 9 inches above ground.

H 37--- 5.3 miles west along State Highway 86 from Pozo Blanco, Pima County, on the old Ajo-Tucson highway, 0.3 mile west of a concrete-protected dip at the center of a curve, and 39 feet south of the center line of the highway. A standard disk, stamped "2040.399 H 37 1933" and set in the top of a concrete post projecting 10 inches above ground.

J 37--- 3.3 miles west along State Highway 86 from Pozo Blanco, Pima County, on the old Ajo-Tucson highway, and 46 feet north of the center line of the highway. A standard disk, stamped "2153.654 J 37 1933" and set in the top of a concrete post projecting 10 inches above ground.

K 37--- 1.3 miles west along State Highway 86 from Pozo Blanco, Pima County, on the old Ajo-Tucson highway, and 51 feet south of the center line of the highway. A standard disk, stamped "2082.315 K 37 1933" and set in the top of a concrete post projecting 9 inches above ground.

L 37--- 0.6 mile east along State Highway 86 from the church at Pozo Blanco, Pima County, on the old Ajo-Tucson highway, on the east side of a low rocky point extending down to the highway from the south, 81 feet south of the center line of the highway, in the top of a silicified rhyolite outcrop, and about 6 inches above the ground. A standard disk, stamped "2457.731 L 37 1933."

M 37--- 28.9 miles west along State Highway 86 from the post office at Sells, Pima County, 2.6 miles east of the church at Pozo Blanco, on the old Ajo-Tucson highway, and 30 feet south of the center line of the highway. A standard disk, stamped "2675.221 M 37 1933" and set in the top of a concrete post projecting 6 inches above ground.

N 37--- 26.8 miles west along State Highway 86 from the post office at Sells, Pima County, on the old Ajo-Tucson highway, 1.4 mile west of Savage's Store (in 1934), 350 feet west of a culvert at the north point of a rocky slope, 46 feet south of the center line of the highway, in the top of a grey outcrop, and about 2 inches above the ground. A standard disk, stamped "2665.612 N 37 1933."

For additional bench marks in this locality, see "Silver Bell Area, Arizona--line 2 (51 Ariz.)."

P 37--- 24.8 miles northwest along State Highway 86 from the post office at Sells, Pima County, on the old Ajo-Tucson highway, 0.5 mile east of Savage's Store (in 1934), 300 feet west of an Indian graveyard, opposite a small clearing on the north side of the highway, and 42 feet south of the center line of the highway. A standard disk, stamped "2518.003 P 37 1933" and set in the top of a concrete post projecting 7 inches above ground.

R 37.-- 22.8 miles northwest along State Highway 86 from the post office at Sells, Pima County, on the old Ajo-Tucson highway, 2.4 miles east of Savage's Store (in 1934), and 36 feet north of the center line of the highway. A standard disk, stamped "2397.813 R 37 1933" and set in the top of a concrete post projecting 8 inches above ground.

S 37.-- 20.9 miles northwest along State Highway 86 from the post office at Sells, Pima County, on the old Ajo-Tucson highway, 4.4 miles east of Savage's Store (in 1934), at a long curve in the highway, and 39 feet south of the center line of the highway. A standard disk, stamped "2261.118 S 37 1933" and set in the top of a concrete post projecting 10 inches above ground.

T 37.-- 18.9 miles northwest along State Highway 86 from the post office at Sells, Pima County, on the old Ajo-Tucson highway, 6.4 miles east of Savage's Store (in 1934), 60 feet north of the center line of the highway, and in line with a row of poles. A standard disk, stamped "2142.191 T 37 1933" and set in the top of a concrete post projecting 10 inches above ground.

U 37.-- 16.9 miles northwest along State Highway 86 from the post office at Sells, Pima County, on the old Ajo-Tucson highway, 8.4 miles east of Savage's Store (in 1934), 66 feet north of the center line of the highway, and in line with a row of poles. A standard disk, stamped "2200.389 U 37 1933" and set in the top of a concrete post projecting 10 inches above ground.

V 37.-- 14.9 miles northwest along State Highway 86 from the post office at Sells, Pima County, on the old Ajo-Tucson highway, 10.4 miles east of Savage's Store (in 1934), and 45 feet south of the center line of the highway. A standard disk, stamped "2304.300 U 37 1933" and set in the top of a concrete post projecting 8 inches above ground.

W 37.-- 12.7 miles northwest along State Highway 86 from the post office at Sells, Pima County, on the old Ajo-Tucson highway, near an Indian village, 60 feet east of a wide arroyo, at a shallow rock out, 46 feet north of the highway, in the top of a rock outcrop, and about 2 inches above the ground. A standard disk, stamped "2400.245 W 37 1933".

NOTE--This bench mark was searched for but not recovered in December 1937.

X 37.-- 10.7 miles northwest along State Highway 86 from the post office at Sells, Pima County, on the old Ajo-Tucson highway, on the east side of a saddle east of the Casabi Trading Station, 96 feet north of the center line of the highway, in the top of a 10-foot-square andesite boulder, and about 4 feet above the ground. A standard disk, stamped "2475.057 X 37 1933".

Y 37.-- 8.7 miles northwest along State Highway 86 from the post office at Sells, Pima County, on the old Ajo-Tucson highway, 1.2 miles southeast of the junction of a road leading to Mildren Mine, 156 feet west of a dip in the highway, and 40 feet north of the center line of the highway. A standard disk, stamped "2507.351 Y 37 1933" and set in the top of a concrete post projecting 8 inches above ground.

Z 37.-- 6.6 miles northwest along State Highway 86 from the post office at Sells, Pima County, on the old Ajo-Tucson highway, 66 feet east of the center line of the highway, 2-1/2 poles south of a corner pole, and in line with the row of poles. A standard disk, stamped "2450.153 Z 37 1933" and set in the top of a concrete post projecting 8 inches above ground.

A 38.-- 4.6 miles northwest along State Highway 86 from the post office at Sells, Pima County, on the old Ajo-Tucson highway, 87 feet northwest of a corner pole with a guy wire, near the junction of a dirt road leading west, 72 feet northeast of the center line of the highway, and in line with a row of poles. A standard disk, stamped "2428.568 A 38 1933" and set in the top of a concrete post projecting 10 inches above ground.

B 38.-- 2.5 miles northwest along State Highway 86 from the post office at Sells, Pima County, 4-1/2 poles southeast of a dip in the highway, on the old Ajo-Tucson highway, 66 feet northeast of the center line of the highway, and in line with a row of poles. A standard disk, stamped "2400.517 B 38 1933" and set in the top of a concrete post projecting 10 inches above ground.

C 38.-- 0.6 mile north along State Highway 86 from the post office at Sells, Pima County, on the old Ajo-Tucson highway, 540 feet north of a wooden bridge over an arroyo at the north edge of town, 42 yards south of a fence corner, 62 feet east of the center line of the highway, and in line with a row of poles. A standard disk, stamped "2360.287 C 38 1933" and set in the top of a concrete post projecting 8 inches above ground.

D 38.-- 1.8 miles east along State Highway 86 from the post office at Sells, Pima County, on the old Ajo-Tucson highway, 0.7 mile east of a wooden bridge over an arroyo east of town, 50 feet east of pole 35, 44 feet south of the center line of the highway, and in line with a row of poles. A standard disk, stamped "2412.239 D 38 1933" and set in the top of a concrete post projecting 8 inches above ground.

E 38.-- 3.8 miles east of Sells, Pima County. This bench mark may be reached from the post office by going 1.5 miles east along a gravel road, thence 2.3 miles east along State Highway 86. It is 121.5 feet south of the center line of the highway, 34.8 feet northwest of a pole with a guy wire, 31 feet south of an east-and-west fence line, 14 feet south of the center of a drainage ditch, 1.7 feet north of a white wooden witness post, and level with the highway. A standard disk, stamped "2499.942 E 38 1933" and set in the top of a concrete post projecting 1 foot above ground.

1473+49.2 (A.S.H.D.).-- 4.1 miles east of Sells, Pima County. This bench mark may be reached from the post office by going 1.5 miles east along a gravel road, thence 2.6 miles east along State

Highway 86. It is at a concrete bridge over a wash, in the center of the top of the south concrete headwall, 17 feet south of the center line of the highway, 9.1 feet east of the west end of the headwall, and about 1/2 foot higher than the highway. An Arizona State Highway Department standard disk, stamped "1473+49.2 2510 1947".

NOTE--It was reported in January 1952 that a "7" has been stamped over a "5" in the designation.

T 118.-- 5.2 miles east of Sells, Pima County. This bench mark may be reached from the post office by going 1.5 miles east along a gravel road, thence 3.7 miles east along State Highway 86. It is 151.5 feet south of the center line of the highway, 57 feet west of a dirt road leading south, 41 feet southeast of a pole, 1.9 feet north of a white wooden witness post, and level with the highway. A standard disk, stamped "T 118 1935" and set in the top of a concrete post projecting 0.7 foot above ground.

1384+80.5 (A.S.H.D.).-- 5.4 miles east of Sells, Pima County. This bench mark may be reached from the post office by going 1.5 miles east along a gravel road, thence 3.9 miles east along State Highway 86. It is at a bridge over a wash, in the center of the top of the south concrete headwall, 19 feet south of the center line of the highway, 6.2 feet east of the west end of the headwall, and 0.4 foot higher than the highway. An Arizona State Highway Department standard disk, stamped "1384+80.5 2570 1947".

F 38.-- 5.8 miles east of Sells, Pima County. This bench mark may be reached from the post office by going 1.5 miles east along a gravel road, thence 4.3 miles east along State Highway 86. It is 0.2 mile west of the junction of dirt roads leading southeast and southwest, 0.2 mile west of a large concrete bridge over a wash, 99.5 feet south of the center line of the highway, 24.3 feet northwest of a pole, 20.1 feet south of an east-and-west fence, 2.3 feet north of a white wooden witness post, and level with the highway. A standard disk, stamped "2589.362 F 38 1933" and set in the top of a concrete post projecting 0.9 foot above ground.

1354+20.9 (A.S.H.D.).-- 6.0 miles east of Sells, Pima County. This bench mark may be reached from the post office by going 1.5 miles east along a gravel road, thence 4.5 miles east along State Highway 86. It is at the junction of dirt roads leading southeast and southwest, 102.5 feet east of the center of the junction, at a large concrete bridge over a wash, in the center of the top of the south concrete headwall, 19 feet south of the center line of the highway, 38 feet east of the west end of the headwall, and about 1/2 foot higher than the highway. An Arizona State Highway Department standard disk, stamped "1354+20.9 2556.98 1947".

NOTE--This bench mark was not included in the relieving of 1952.

For additional bench marks in this locality, see "Arivaca Area, Arizona--Line 11 (3 Ariz.)."

G 38.-- 7.6 miles east of Sells, Pima County. This bench mark may be reached from the post office by going 1.5 miles east along a gravel road, thence 4.5 miles east along State Highway 86, and thence 1.8 miles southwest along a gravel road. It is 418 feet southeast of the center line of the new highway, 101.4 feet northeast of a pole, 44.5 feet southeast of the center line of the old highway, 8.8 feet northwest of a fence line, 2.2 feet north of a white wooden witness post, and level with the highway. A standard disk, stamped "2660.592 G 38 1933" and set in the top of a concrete post projecting 0.8 foot above ground.

NOTE--This bench mark was not included in the relieving of 1952.

H 38.-- 9.7 miles east of Sells, Pima County. This bench mark may be reached from the post office by going 1.5 miles east along a gravel road, thence 8.2 miles east along State Highway 86. It is on the old Ajo-Tucson highway, 0.1 mile east of a road leading north to the Akron Gold Mining Co. property, 100 feet northeast of pole 226, 57 feet southeast of the center line of the highway, and in line with a row of poles. A standard disk, stamped "2723.098 H 38 1933" and set in the top of a concrete post projecting 10 inches above ground.

NOTE--This bench mark was not included in the relieving of 1952.

For additional bench marks in this locality, see "Arivaca Area, Arizona--Line 10 (3 Ariz.)."

J 38.-- 12.6 miles northeast of Sells, Pima County. This bench mark may be reached from the post office by going 1.5 miles east along a gravel road, thence 11.6 miles northeast along State Highway 86, thence 0.2 mile south along a dirt road, and thence 0.6 mile west along old State Highway 86. It is 0.2 mile east of a road junction, 45 yards north of pole 322, 50 feet south of the center line of the old highway, and about 2 feet higher than the road. A standard disk, stamped "2857.156 J 38 1933" and set in the top of a concrete post projecting 0.8 foot above ground.

K 38.-- 13.9 miles northeast of Sells, Pima County. This bench mark may be reached from the post office by going 1.5 miles east along a gravel road, thence 11.6 miles northeast along State Highway 86, thence 0.2 mile southeast along a dirt road, and thence 0.6 mile east along the old highway. It is at the point where the road crosses a wash, 213.5 feet south of the center of the crossing, 168 feet southeast of the center line of the old highway, 155.8 feet east of a pole, in the top of a large outcrop with old Indian carvings, and about 4 feet higher than the road. A standard disk, stamped "3001.431 K 38 1933".

876+1240 (A.S.H.D.).-- 15.2 miles northeast of Sells, Pima County. This bench mark may be reached from the post office by going 1.5 miles east along a gravel road, thence 13.7 miles northeast along State Highway 86. It is at a 5- by 44-foot concrete culvert, in the center of the top of the southeast headwall, 19 feet southeast of the center line of the highway, and level with the highway. An Arizona State Highway Department standard disk, stamped "876+1240 3003.63 1948".

NOTE--This bench mark was not included in the relieving of 1952.

UNITED STATES COAST AND GEODETIC SURVEY
Second-order leveling

11.6 Mi. SE of Ajo to Tucson, Arizona

-3

L 38.-- 15.6 miles northeast of Sells, Pima County. This bench mark may be reached from the post office by going 1.5 miles east along a gravel road, thence 14.1 miles northeast along State Highway 86. It is 8.5 feet northwest of the center line of the highway, 6.7 feet southeast of the northwest edge of the highway, near the center of the west-bound lane, in the top of a rock outcrop (a square iron box has been put around the mark), and 0.9 foot under the bed of the highway. A standard disk, stamped "3003,593 L 38 1933."

NOTE--This bench mark was not included in the releveling of 1952.

M 38.-- 17.7 miles northeast of Sells, Pima County. This bench mark may be reached from the post office by going 1.5 miles east along a gravel road, thence 16.2 miles northeast along State Highway 86. It is on the old Ajo-Tucson highway, 0.1 mile northeast of a ranch house and a dirt-road intersection, 40 yards east of a corner pole guyed to the south, and 50 feet north of the center line of the highway. A standard disk, stamped "3146,582 M 38 1933" and set in the top of a concrete post projecting 8 inches above ground.

N 38.-- 18.6 miles northeast of Sells, Pima County. This bench mark may be reached from Sells by going 14.8 miles northeast along State Highway 86, thence 3.8 miles northeast along the old Ajo-Tucson highway. It is 64 feet north of the center line of the highway, 24 feet south of a pole, and 36 feet south of a fence line. A standard disk, stamped "3063,837 N 38 1933" and set in the top of a concrete post projecting 8 inches above ground.

P 38.-- 20.5 miles northeast of Sells, Pima County. This bench mark may be reached from Sells by going 14.8 miles northeast along State Highway 86, thence 5.7 miles northeast along the old Ajo-Tucson highway. It is 0.3 mile southwest of a rise, and 48 feet south of the center line of the highway. A standard disk, stamped "3054,223 P 38 1933" and set in the top of a concrete post projecting 8 inches above ground.

R 38.-- 22.5 miles northeast of Sells, Pima County. This bench mark may be reached from Sells by going 14.8 miles northeast along State Highway 86, thence 7.7 miles northeast along the old Ajo-Tucson highway. It is 0.1 mile west of the junction of a dirt road leading north, 310 feet east of a double-pipe culvert with masonry headwalls, 42 feet north of the center line of the highway, and 43 feet west of a pole. A standard disk, stamped "3002,747 R 38 1933" and set in the top of a concrete post projecting 8 inches above ground.

S 38.-- 24.6 miles northeast of Sells, Pima County. This bench mark may be reached from Sells by going 14.8 miles northeast along State Highway 86, thence 9.8 miles northeast along the old Ajo-Tucson highway. It is 0.4 mile west of Roadside Mine, 51 feet southeast of the middle of a 4-foot pipe culvert with concrete headwalls, 27 feet south of the center line of the highway, in the top of an andesite outcrop projecting 3 inches above ground, and about 2 feet lower than the highway. A standard disk, stamped "2902,353 S 38 1933."

T 38.-- 26.5 miles northeast of Sells, Pima County. This bench mark may be reached from Sells by going 14.8 miles northeast along State Highway 86, thence 11.7 miles northeast along the old Ajo-Tucson highway. It is 1.5 miles east of Roadside Mine, 0.2 mile east of a turn in the road and the junction of a dirt road leading south, 40 feet north of the center line of the highway, and in line with a row of poles. A standard disk, stamped "2874,902 T 38 1933" and set in the top of a concrete post projecting 10 inches above ground.

U 38.-- 28.4 miles northeast along State Highway 86 from Sells, Pima County, 0.1 mile south of a tank on the north side of the highway, 270 feet east of the junction of a dirt road leading south to Calvillo Camp, 31 feet north of the center line of the highway, and in line with a row of poles. A standard disk, stamped "2765,631 U 38 1933" and set in the top of a concrete post projecting 8 inches above ground.

V 38.-- 30.4 miles northeast along State Highway 86 from Sells, Pima County, 28.8 miles southwest of the U.S. Veterans' Hospital at Tucson, 1.3 miles west of the boundary of an Indian reservation, 30 feet south of the center line of the highway, and in line with a row of poles. A standard disk, stamped "2689,929 V 38 1933" and set in the top of a concrete post projecting 10 inches above ground.

W 38.-- 26.9 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 205 yards southwest of the southwest corner of a concrete culvert, 232 feet south of the center line of the highway, 207 feet south of the south end of a 24-inch corrugated-metal pipe culvert, 60 feet south of the center line of the old road, 38.4 feet west of a pole, 2.3 feet east of a white wooden witness post, and about 4 feet lower than the road. A standard disk, stamped "2643,712 W 38 1933" and set in the top of a concrete post projecting 0.5 foot above ground.

3 (A.S.H.D.).-- 25.6 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 12 yards north of a line of poles, at a 5- by 14-foot concrete bridge, in the center of the top of the south headwall, and 16 feet south of the center line of the highway. An Arizona State Highway Department standard disk.

2 (A.S.H.D.).-- 25.0 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 13 yards northwest of a pole, at a 4- by 10-foot concrete culvert, in the center of the top of the southeast headwall, 16 feet southeast of the center line of the highway, and level with the highway. An Arizona State Highway Department standard disk.

X 38 RESET.-- 24.9 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 50 feet

southeast of the center line of the highway, 3.9 feet northeast of a pole, in line with the row of poles, 3.4 feet southwest of a white wooden witness post, and about 3 feet lower than the highway. A standard disk, stamped "X 38 RESET 1951" and set in the top of a concrete post projecting 0.5 foot above ground.

NOTE--This bench mark was established and its elevation determined by a party from this Bureau during the releveling of 1951-52.

1 (A.S.H.D.).-- 24.7 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 2.4 miles west of the grade school at Three Points (formerly Robles Ranch), 0.2 mile west of the point where a power-transmission line crosses the highway, at a 4- by 6-foot concrete culvert, in the center of the top of the southeast headwall, 14 feet southeast of the center line of the highway, and about 1/2 foot higher than the highway. An Arizona State Highway Department standard disk.

Y 296.-- 24.0 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 1.7 miles west of the grade school at Three Points (formerly Robles Ranch), 150 yards west of the T-junction of a road leading north, 71 feet north of the center line of the highway, 3.5 feet east of a fence corner, 2.6 feet west of a white wooden witness post, and about 3 feet lower than the highway. A standard disk, stamped "Y 296 1951" and set in the top of a concrete post projecting 0.6 foot above ground.

Y 38 RESET.-- 23.1 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 0.9 mile west of Three Points (formerly Robles Ranch) on the old Ajo-Tucson highway, 0.7 mile east of a steel bridge, 0.1 mile east of Sawyers Ranch, 30 yards north of the center line of the highway, and 50 feet north of a row of poles. A standard disk, stamped "Y 38 RESET 1935" and set in the top of a concrete post.

NOTE--This bench mark was established and its elevation determined by engineers of the Arizona State Highway Department in May 1936. It was not included in the releveling of 1951-52.

X 296.-- 23.1 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 0.9 mile west of the grade school at Three Points (formerly Robles Ranch), 51.5 feet north of the center line of the highway, 25 feet west of the southwest corner of a wooden fence around the Sawyers Ranch house, 3.5 feet west of a pole, 2 feet east of a white wooden witness post, and about 2 feet lower than the road. A standard disk, stamped "X 296 1951" and set in the top of a concrete post projecting 0.5 foot above ground.

268+15 (A.S.H.D.).-- 22.4 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 0.3 mile west of the grade school at Three Points (formerly Robles Ranch), 17 yards south of a line of poles and an east-and-west fence line, at a 4- by 6-foot concrete culvert, in the center of the top of the north headwall, 14 feet northwest of the center line of the highway, and level with the highway. An Arizona State Highway Department standard disk, stamped "268+15 2531,32".

A 113.-- 22.0 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, at Three Points (formerly Robles Ranch), 0.1 mile east of the grade school, 94 feet northwest of the center line of the highway, 51.8 feet northeast of the northeast corner of a Gulf service station, 2.5 feet east of a white wooden witness post, and about 1 foot lower than the highway. A standard disk, stamped "A 113 1935" and set in the top of a concrete post projecting 0.4 foot above ground.

R.M. 1 A 113.-- 52.8 feet northeast of bench mark A 113 described above, 91 feet northwest of the center line of the highway, and about 1/2 foot lower than the highway. A standard reference-mark disk, stamped "BM A 113 NO 1 1936" and set in the top of a concrete post projecting 0.2 foot above ground.

R.M. 2 A 113.-- 40.7 feet southeast of bench mark A 113 described above, 56.2 feet east of the southeast corner of the Gulf service station, 53.5 feet northwest of the center line of the highway, 13.9 feet west of the flood-light pole at the service station, and about 1/2 foot lower than the highway. A standard reference-mark disk, stamped "BM A 113 NO 2 1936" and set in the top of a concrete post projecting 0.8 foot above ground.

343+14 (A.S.H.D.).-- 21.1 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 1.0 mile east of Three Points (formerly Robles Ranch), 0.2 mile southwest of the Y-junction of power-transmission lines, 23 yards southeast of a power-transmission line, 11 yards southeast of a telephone line, at a 4- by 8-foot concrete culvert, in the center of the top of the northwest headwall, 14 feet northwest of the center line of the highway, and level with the highway. An Arizona State Highway Department standard disk, stamped "343+14 2535,70."

Z 38 RESET.-- 21.0 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 0.2 mile southwest of the Y-junction of power-transmission lines, 181 feet northeast of the northeast corner of a 4- by 8-foot concrete culvert, 89 feet northwest of the center line of the highway, 38.5 feet northeast of a pole, in line with the row of poles, and 2.7 feet northeast of a white wooden witness post. A standard disk, stamped "Z 38 RESET 1935" and set in the top of a concrete post projecting 0.2 foot above ground.

NOTE--This bench mark was established by engineers of the Arizona State Highway Department in May 1936. Its elevation is derived from the releveling of 1951-52.

367+99.25 (A.S.H.D.).-- 20.6 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 23 yards southeast of a power-transmission line, 11 yards southeast of a telephone line, at a 6- by 24-foot concrete culvert, in the center of the top of the northwest headwall, 14 feet northwest of the center line of the highway, and level with the highway. An Arizona State Highway Department standard disk, stamped "367+99.25 2533,49."

395+86.67 (A.S.H.D.).-- 20.0 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 23 yards southeast of a power-transmission line, 11 yards southeast of a telephone line, at a 4- by 50-foot concrete culvert, in the center of the top of the northwest headwall, 14 feet northwest of the center line of the highway, and about 1/2 foot lower than the highway. An Arizona State Highway Department standard disk, stamped "395+86.67 2524.75."

405+35 (A.S.H.D.).-- 19.8 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 23 yards southeast of a power-transmission line, 11 yards southeast of a telephone line, at a 4- by 15-foot concrete culvert, in the center of the top of the north headwall, 14 feet north of the center line of the highway, and level with the highway. An Arizona State Highway Department standard disk, stamped "405+35 2523.14."

443+83 (A.S.H.D.).-- 19.1 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 23 yards southeast of a power-transmission line, 11 yards southeast of a telephone line, at a 4- by 15-foot concrete culvert, in the center of the top of the northwest headwall, 14 feet northwest of the center line of the highway, and level with the highway. An Arizona State Highway Department standard disk, stamped "443+83 2510.01."

A 39 RESET.-- 19.0 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 0.1 mile northeast of the junction of a dirt road leading north, 91 feet northwest of the center line of the highway, 89 feet northeast of a pole, 9 feet northwest of a power-transmission line, 3.1 feet east of a white wooden witness post, and about 1 foot lower than the highway. A standard disk, stamped "A 39 RESET 1935" and set in the top of a concrete post projecting 0.5 foot above ground. NOTE--This bench mark was established by engineers of the Arizona State Highway Department in May 1936. Its elevation is derived from the releveling of 1951-52.

465+40.25 (A.S.H.D.).-- 18.7 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 24 yards south of a power-transmission line pole, 11 yards southeast of a telephone line, at a 6- by 24-foot concrete culvert, in the center of the top of the north headwall, 14 feet north of the center line of the highway, and level with the highway. An Arizona State Highway Department standard disk, stamped "465+40.25 2502.11."

491+31.25 (A.S.H.D.).-- 18.2 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, at a 6- by 24-foot concrete culvert, in the center of the top of the north headwall, 14 feet northwest of the center line of the highway, and level with the highway. An Arizona State Highway Department standard disk, stamped "491+31.25 2491.95."

540+60 (A.S.H.D.).-- 17.2 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 11 yards southeast of a telephone line, at a 6- by 16-foot concrete culvert, in the center of the top of the northwest headwall, 14 feet northwest of the center line of the highway, and about 1/2 foot lower than the highway. An Arizona State Highway Department standard disk, stamped "430+60 2475.61."

549+60 (A.S.H.D.).-- 17.1 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 11 yards southeast of a telephone line, at a 6- by 8-foot concrete culvert, in the center of the top of the northwest headwall, 14 feet northwest of the center line of the highway, and about 1/2 foot higher than the highway. An Arizona State Highway Department standard disk, stamped "549+60 2472.92."

B 39 RESET.-- 17.0 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 1.2 miles southwest of a cattle guard across the highway, 220 feet west of a 36-inch metal-pipe culvert with concrete headwalls, 88 feet northwest of the center line of the highway, 69.5 feet northeast of a pole, 3.2 feet northeast of a white wooden witness post, and about 1-1/2 feet lower than the highway. A standard disk, stamped "B 39 RESET 1935" and set in the top of a concrete post projecting 0.6 foot above ground.

NOTE--This bench mark was established by engineers of the Arizona State Highway Department in May 1936. Its elevation is derived from the releveling of 1951-52.

562+40 (A.S.H.D.).-- 16.8 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 1.0 mile southwest of a cattle guard across the highway, 11 yards south of a telephone line, at a 6- by 8-foot concrete culvert, in the center of the top of the northwest headwall, 14 feet northwest of the center line of the highway, and level with the highway. An Arizona State Highway Department standard disk, stamped "562+40 2469.76."

594+10 (A.S.H.D.).-- 16.2 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 0.4 mile southwest of a cattle guard across the highway, 20 yards northwest of a pole, at a 6- by 8-foot concrete culvert, in the center of the top of the northwest headwall, 14 feet northwest of the center line of the highway, and about 1 foot higher than the highway. An Arizona State Highway Department standard disk, stamped "594+10 2460.39."

607+00 (A.S.H.D.).-- 16.0 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 3.3 miles southwest of the main entrance to Ryan Airport, 0.1 mile southwest of a cattle guard across the highway, at a 6- by 6-foot concrete culvert, in the center of the top of the northwest headwall, 14 feet northwest of the center line of the highway, and about 1/2 foot higher than the highway. An Arizona State Highway Department standard disk, stamped "607+00 2455.56."

EFS No. 129.-- 15.9 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, center line of the highway at the middle of a cattle guard.

631+07 (A.S.H.D.).-- 15.5 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 2.8 miles southwest of the main entrance to Ryan Airport, 75 yards northeast of a gate in a fence and a track road leading northwest, at a 4- by 6-foot concrete culvert, in the center of the top of the northwest headwall, 14 feet northwest of the center line of the highway, and about 1/2 foot higher than the highway. An Arizona State Highway Department standard disk, stamped "631+07 2449.64."

649+60 (A.S.H.D.).-- 15.2 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 2.5 miles southwest of the main entrance to Ryan Airport, 23 yards north of a pole, at a 6- by 6-foot concrete culvert, in the center of the top of the northwest headwall, 14 feet northwest of the center line of the highway, and about 1/2 foot higher than the highway. An Arizona State Highway Department standard disk, stamped "649+60 2444.53."

654+55 (A.S.H.D.).-- 15.1 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, at a 4- by 12-foot concrete culvert, in the center of the top of the north headwall, 14 feet north of the center line of the highway, and level with the highway. An Arizona State Highway Department standard disk, stamped "654+55 2441.91."

C 39 RESET.-- 15.0 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 2.3 miles southwest of the main entrance to Ryan Airport, 100.5 feet northwest of the center line of the highway, 55 feet northwest of a fence, 2.4 feet southwest of a white wooden witness post, and about 1-1/2 feet lower than the highway. A standard disk, stamped "C 39 RESET 1935" and set in the top of a concrete post projecting 0.4 foot above ground.

NOTE--This bench mark was established by engineers of the Arizona State Highway Department in October 1935. Its elevation is derived from the releveling of 1951-52.

667+05 (A.S.H.D.).-- 14.8 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 2.1 miles southwest of the main entrance to Ryan Airport, 12 yards southeast of the right-of-way fence, at a 4- by 12-foot concrete-box culvert, in the center of the top of the northwest headwall, 13.5 feet northwest of the center line of the highway, and level with the highway. An Arizona State Highway Department standard disk, stamped "667+05 2438.56."

701+95 (A.S.H.D.).-- 14.1 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 1.4 miles southwest of the main entrance to Ryan Airport, 28 yards west of pole 1170, at a 4- by 6-foot concrete-box culvert, in the center of the top of the northwest headwall, 13.5 feet northwest of the center line of the highway, and about 1/2 foot higher than the highway. An Arizona State Highway Department standard disk, stamped "701+95 2431.58."

713+45 (A.S.H.D.).-- 13.9 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 1.2 miles southwest of the main entrance to Ryan Airport, at a 4- by 6-foot concrete-box culvert, in the center of the top of the northwest headwall, 13.5 feet northwest of the center line of the highway, and about 1/2 foot higher than the highway. An Arizona State Highway Department standard disk, stamped "713+45 2430.01."

EFS No. 135.-- 13.9 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, center line of the highway at the T-junction of a dirt road leading north.

D 296.-- 13.6 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 0.9 mile southwest of the main entrance to Ryan Airport, at the T-junction of a sandy dirt road leading north, 50 feet southeast of the center of the junction, 47 feet southeast of the center line of the highway, 52.9 feet northwest of a fence, 18.7 feet northeast of pole 1185, 2.2 feet northeast of a white wooden witness post, and about 1 foot lower than the highway. A standard disk, stamped "D 296 1951" and set in the top of a concrete post projecting 0.9 foot above ground.

EFS No. 130.-- 13.6 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, center line of the highway at the T-junction of a sandy dirt road leading north.

For additional bench marks in this locality, see "Silver Bell Area, Arizona--Line 23 (51 Ariz.)."

D 39 RESET.-- 13.0 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 0.6 mile west of an abandoned service station (in 1935), 500 feet west of a concrete culvert, 81 feet north of the center line of the highway, and 50 feet north of a row of poles. A standard disk, stamped "D 39 RESET 1935" and set in the top of a concrete post.

NOTE--This bench mark was established and its elevation determined by engineers of the Arizona State Highway Department in September 1935. It was not included in the releveling of 1951-52.

C 296.-- 12.7 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, across the highway from the main entrance to Ryan Airport, 108 feet southwest across the highway from the center of the T-junction of the drive to the airport, 47.5 feet southeast of the center line of the highway, 30.5 feet northwest of a power-transmission line pole, 19 feet southwest of a telephone pole, 2.4 feet northeast of a white wooden witness post, and about 2 feet higher than the highway. A standard disk, stamped "C 296 1951" and set in the top of a concrete post projecting 0.3 foot above ground.

EFS No. 132.-- 12.7 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, at Ryan Airport, center line of the highway at the T-junction of the entrance drive.

Spur line through Ryan Airport

V 296.-- 12.7 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, thence 0.2 mile northwest along the entrance drive; at Ryan Airport, 99 feet southeast of the southwest corner of the west hangar (with a control tower), 45 feet north of a covered water reservoir, at the high-pressure water tank, in the east end of the north face of the north foundation, 0.7 foot west of the northeast corner of the foundation, and 0.7 foot above the ground. A standard disk, stamped "V 296 1951" and set vertically.

U 296.-- At Ryan Airport, Pima County, 0.3 mile northwest of the entrance, 130 yards northwest of the northwest corner of the west hangar (with a control tower), 123 feet northwest of the northwest corner of the apron, and 2.1 feet east of a white wooden witness post. A standard disk, stamped "U 296 1951" and set in the top of a concrete post projecting 0.7 foot above ground.

T 296.-- At Ryan Airport, Pima County, at the northeast corner of the field, 0.5 mile northwest of the main control tower, 161 feet north of the northeast corner of the east one of two north-and-south runways, 4.4 feet east of a white wooden witness post, and level with the runway. A standard disk, stamped "T 296 1951" and set in the top of a concrete post projecting 0.4 foot above ground.

EFS No. 131.-- Ryan Airport, high point, 100 yards west of the west end of the west hangar, and at the center of the south end of the west one of two north-and-south runways.

End of the spur line.

795+00 (A.S.H.D.).-- 12.3 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 0.4 mile northeast of the main entrance to Ryan Airport, 36.9 feet southeast of a northwest-and-southeast fence, at a 12- by 5-foot concrete culvert, in the center of the top of the northwest headwall, 13.5 feet northwest of the center line of the highway, and about 1/2 foot higher than the highway. An Arizona State Highway Department standard disk, stamped "795+00 2425.42."

B 296.-- 12.0 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 1.4 miles southwest of the Y-junction of a road leading to Rancho Diablo, 0.7 mile northeast of the main entrance to Ryan Airport, 180 feet southeast of the center of a dip in the highway, 100 feet southeast of the center line of the highway, 89 feet southeast of a pole, 6.6 feet east of a white wooden witness post, 1.8 feet northeast of a fence, and about 1-1/2 feet lower than the highway. A standard disk, stamped "B 296 1951" and set in the top of a concrete post projecting 0.4 foot above ground.

E 39 RESET.-- 11.0 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 1.7 miles northeast of the main entrance to Ryan Airport, 0.4 mile southwest of the Y-junction of a road leading to Rancho Diablo, at the point where power-transmission lines to Rancho Diablo cross the highway, 167.5 feet southwest of the southwest corner of a concrete culvert, 51 feet northwest of the center line of the highway, 2.4 feet southeast of a power-transmission line pole, 2.3 feet northeast of a white wooden witness post, and about 4 feet lower than the highway. A standard disk, stamped "2423.194 E 39 1933 RESET 1951" and set in the top of a concrete post projecting 0.5 foot above ground.

NOTE--This bench mark was established and its elevation determined by a party from this Bureau during the releveling of 1951-52.

913+52 (A.S.H.D.).-- 11.0 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 1.7 miles northeast of the main entrance to Ryan Airport, 0.4 mile southwest of the Y-junction of a road leading to Rancho Diablo, 62 yards northeast of the point where a power-transmission line crosses the highway, at a 17- by 8-foot concrete culvert, in the center of the top of the northwest headwall, 13.5 feet northwest of the center line of the highway, and level with the highway. An Arizona State Highway Department standard disk, stamped "913+52 2427.00."

EFS No. 133.-- 10.6 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, center line of the highway at the Y-junction of a dirt-road leading north to Rancho Diablo.

A 296.-- 10.0 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 0.8 mile southwest of the crossing of the El Paso Natural Gas line, 0.4 mile northeast of the Y-junction of a dirt road leading north to Rancho Diablo, 58 feet southeast of the center line of the highway, 8.8 feet northeast of a pole, and 2.6 feet southwest of a white wooden witness post. A standard disk, stamped "A 296 1951" and set in the top of a concrete post projecting 0.4 foot above ground.

EFS No. 134.-- 9.2 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, center line of the highway at the intersection of a private road along the El Paso Natural Gas line.

F 39.-- 8.9 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 1.7 miles northeast of the Y-junction of a dirt road leading north to Rancho Diablo, 0.3 mile east of the crossing of the El Paso Natural Gas line, 30 yards north of the north base of Snyder's Butte, 72 feet south of the center line of the highway, 27 feet south of the intersection of a power-transmission line and telephone line, in the top of a 2- by 4-foot lava outcrop projecting 0.2 foot above ground, and about 2 feet lower than the highway. A standard disk, stamped "2480.500 F 39 1933."

Snyder Hill (Ariz.Geod.S.).-- 8.9 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 1.7 miles northeast of the Y-junction of a dirt road leading north to Rancho Diablo, 0.3 mile east of the crossing of the El Paso Natural Gas line, 250 yards south of the center line of the highway, on the top of a long hill known as Snyder Hill, and in the top of a 2- by 2-foot rock outcrop projecting 0.4 foot above ground. A State Survey standard disk.

R.M. 1 Snyder Hill (Ariz.Geod.S.).-- 57 feet north of triangulation station Snyder Hill described above, on the top of Snyder Hill, in the top of a rock outcrop, and about 10 feet lower than the top of the hill. A standard reference-mark disk, stamped "SNYDER HILL NO. 1 1935."

R.M. 2 Snyder Hill (Ariz.Geod.S.).-- 33.1 feet east of triangulation station Snyder Hill described above, near the top of Snyder Hill, in the top of a rock outcrop projecting 0.5 foot above ground, and about 4 feet lower than the top of the hill. A standard reference-mark disk, stamped "SNYDER HILL NO. 2 1935."

Azimuth mark Snyder Hill (Ariz.Geod.S.).-- 8.9 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 1.7 miles northeast of the Y-junction of a road leading north to Rancho Diablo, 0.3 mile east of the crossing of the El Paso Natural Gas line, 400 yards south of the highway, 150 yards south of triangulation station Snyder Hill described above, on the highest point of the south end of the ridge of Snyder Hill, in the top of a rock outcrop, and about 20 feet lower than the top of the hill. A State Survey standard disk, stamped "SNYDER HILL AZI NO 3 1935."

W 296.-- 8.0 miles southwest along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 1.7 miles southwest of the T-junction of Kinney Road, 0.9 mile northeast of Snyder Hill, 67 feet southeast of the center line of the highway, 52 feet north of a cactus stump, 27 feet south of a pole, 23 feet southeast of a drainage ditch, 2.1 feet northeast of a white wooden witness post, and about 1-1/2 feet lower than the highway. A standard disk, stamped "W 296 1951" and set in the top of a concrete post projecting 0.4 foot above ground.

G 39.-- 7.0 miles west along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 0.7 mile west of the T-junction of Kinney Road leading northwest, 0.1 mile east of a wash, 650 feet east of a dip, 208.5 feet southeast of a caution sign DIP, 90.5 feet south of the center line of the highway, 49.6 feet southeast of a pole, and about 2 feet lower than the highway. A standard disk, stamped "2554.726 G 39 1933" and set in the top of a concrete post projecting 0.5 foot above ground.

R 112 RESET.-- 6.2 miles west along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, at the junction of Kinney Road leading northwest, 81.5 feet northwest of the center line of the highway, 48.5 feet southwest of the center line of Kinney Road, 66 feet northwest of a power-transmission line pole, 2.5 feet north of a white wooden witness post, and about 1 foot lower than the highway. A standard disk, stamped "R 112 1935 RESET 1951" and set in the top of a concrete post projecting 0.4 foot above ground.

NOTE--This bench mark was established and its elevation determined by a party from this Bureau during the releveling of 1951-52.

For additional bench marks in this locality, see "Silver Bell Area, Arizona--Line 27 (51 Ariz.)."

1218+10 (A.S.H.D.).-- 5.1 miles west along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, 1.0 mile east of the junction of Kinney Road leading northwest, at the T-junction of a gravel road leading north, 27 feet northeast of the center of the junction, 14 feet north of the center line of the highway, at a 3-1/2- by 5-foot concrete-box culvert under the highway, in the center of the top of the north concrete headwall, level with the highway. An Arizona State Highway Department standard disk, stamped "1218+10 2647.70."

H 39.-- 4.8 miles west along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, at the Pass, on the inside of a wide curve, 124.6 feet southeast of the T-junction of a gravel road leading north, 27 feet northeast of the center line of the gravel road, 14 feet north of the center line of the highway, in the top of a 2-foot outcrop flush with the ground surface of the highway. A standard disk.

J 39.-- 3.0 miles west along State Highway 86 from the U.S. Veterans' Hospital at Tucson, Pima County, at the intersection of Mission Road leading north, 27 feet northeast of the center of the center line of the highway, in the top of a chert outcrop, and stamped "2501.776"

For additional bench marks in this locality, see "Silver Bell Area, Arizona--Line 27 (51 Ariz.)."

K 39.-- city hall section of concrete tower line 1933" above

Avenue, 8.1 feet south of pole 142-A/I, and 1.2 feet east of a concrete wall in front of a house. A standard disk, stamped "2354.146 L 39 1933" and set in the top of a concrete post flush with the ground.

TUCSON.-- At Tucson, Pima County, in a small park west of the city hall, 157.8 feet west of the base of the steps at the west entrance to the city hall, 38.8 feet south of the south edge of the sidewalk on Alameda Street, 37.6 feet east of the east edge of the sidewalk on Main Street, and 36 feet north of the north edge of the sidewalk on Ott Street. A standard disk, stamped "2362.131 TUCSON 1933" and set in the top of a concrete pyramid frustum with a 12-inch square top and projecting 3 inches above ground.

For additional bench marks in the vicinity of Tucson, see "Globe to Tucson, Arizona (16 Ariz.)," "Yuma, Ariz., to Blanding, N.Mex. (66 Ariz.)," and "Tucson to Nogales, Arizona (78 Ariz.)."

End of the line.