FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

Contract 2000C020
Upper Agua Fria
Floodplain Delineation
Study
RBF Consulting
#45-100648
Elevation Reference Monuments

Surveyor's Certificate

This survey was conducted under my direction during the months of March 2002 and June 2002. The information in this book is correct and accurate to the best of my knowledge and belief.

Brent Smith, RLS

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
29891
BRENT J.
SMITH
Date Signed 06/28/02
ARIZONA, U.S.A.

06/28/02
Date

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TABLE OF CONTENTS

1. SURVEY SUMMARY

    - Control Datum
    - Equipment
    - Outline of Procedures

2. ELEVATION REFERENCE MONUMENTS

    - Coordinate listing NAD83
    - Coordinate listing Lat. Long.
    - Confidence Region
    - Location Map
    - Location Photo

3. ADJUSTMENT REPORT

4. ELEVATION REFERENCE MONUMENT PHOTOS

5. CONTROL DATA SHEETS

6. GPS OBSERVATION LOGS

7. MONUMENT SKETCHES

    - Monument Detail
    - Sketches

SURVEY SUMMARY

The scope of this project was to set 37 elevation reference marks (ERM's) along the upper Agua Fria river and its tributaries and perform a structure survey of all pipes, bridges, and culverts affecting the area. RBF Consulting performed this work under the direction of Brent Smith, RLS between March and June of 2002.

All work was referenced to the North American Datum 1983 (NAD83) epoch 1992. All elevations were referenced to North American Vertical Datum 1988 (NAVD88). Control monuments were recovered from the Maricopa county Department of Transportation GDACS network and the National Geodetic Survey (NGS).

Horizontal control

In the area encompassed by this project we recovered 4 GDACS control monuments with coordinates published by the Maricopa County Department of Transportation (MCDOT). These points were observed by MCDOT between 1998 and 2000. This was a part of their Geodetic Densification and Cadastral Survey (GDACS) project. The horizontal positions of these monuments have been accepted by the National Geodetic Survey (NGS) and given a horizontal order of B. The published values are related to NAD83 (1992)

Vertical control

The same monuments that were used for horizontal control have a vertical component provided by MCDOT. The elevations were established by determining an ellipsoidal height by GPS observation and referencing this to NAD83. The orthometric height was then determined using a high-resolution geoid model (geoid 99) with precise GPS observation and processing techniques. The NGS publishes these results as Third Order Class II ellipsoidal heights. Since this is not given a vertical order additional vertical control was used to verify vertical tolerance of minimum third accuracy order. Measurements were made to two additional NGS benchmarks to verify vertical control. This information is provided in section 5.

Equipment

All GPS work was preformed using Trimble 4000 series receivers (4000ssi, 4700, 4800). Compact L1/L2 antennas with ground planes were used where external antennas were needed. All antennas used collect L1/L2 and p-code. These antennas are designed to help eliminate multipath and unwanted noise from the observation data. Trimmark II radios were used for RTK work. Trimble Geomatics Office version 1.5 software was used to process field data. Star*Net-

Pro Version 6.0.18 software was used to perform a least squares adjustment of the static measurements. This allowed us to analyze the quality of both the field measurements and the network. The structures were located with the use of a Geodimeter 600 robotic total station theodolite using conventional survey methods.

Outline of survey procedures

Structure surveys

The structures were mapped using the geodimeter 600 from control points established using GPS RTK methods. This ensured all of the structures would relate to the project control network. An as built sketch was made of the structure and photos were taken.

Elevation reference monument (ERM) surveys

The ERM's were set in locations determined by the Maricopa County Flood Control District. A detail of the type of monument is shown in section 8. The locations and elevations were then determined though GPS static survey methods. At each monument three photos were taken and a sketch map was made to depict the monument and a rout to its location.

Static methods

Where static survey methods were used we designed survey procedures to minimize errors and give us confidence in our results. Fixed height tripods or bipods were used for all observations to eliminate antenna height errors. One GPS "base" receiver was set up to collect data over a control point. A second "rover" receiver was then taken to each ERM where it collected data for 30 minutes. The base receiver was then moved to another control point and each of the ERMs were observed a second time for another 30 minutes. The use of these independent measurements confirmed the quality of our fieldwork and provided data for a stronger final adjustment. Observation logs were filled out for each session. These logs included the height of the antenna, the start and end time of the session, the receiver serial number, and the name of the field personnel. The data was then processed with the use of Trimble Geomatics Office software so that we could analyze the quality of both the fieldwork and the data the receiver collected. The resulting measurements were then run through a least squares adjustment using StarNet software. This adjustment analyzed how well our independent measurements fit together and allowed us to produce final positions for our set monuments.

RTK methods

Where RTK survey methods were used we chose a field procedure that would minimize human error and inaccurate data associated with RTK GPS measurements. A base station receiver was set up on a fixed height tripod on a control point. A radio link was then set up to broadcast its location to a second (rover) receiver. The rover would then gain initialization "on the fly". This means that it has determined it's differential position from the base receiver. The rover receivers were set up on fixed height poles with bipods. A 90 second measurement was taken on another control point to verify that the setup is correct and that the RTK results are consistent with our static measurements. Each point located with RTK was then measured for ninety seconds. The receiver was then forced to physically loose lock with the satellites and then re-initialize at least 40ft. from where it gained initialization the first time. This forces it to use a different set of data to solve for its position. The monument was then measured for another ninety seconds. The results of the two measurements were then compared for quality assurance.

45-100648.002 Upper Agua Fria ERMs
NAD 83/NAVD 88
RBF Consulting 6/11/2002

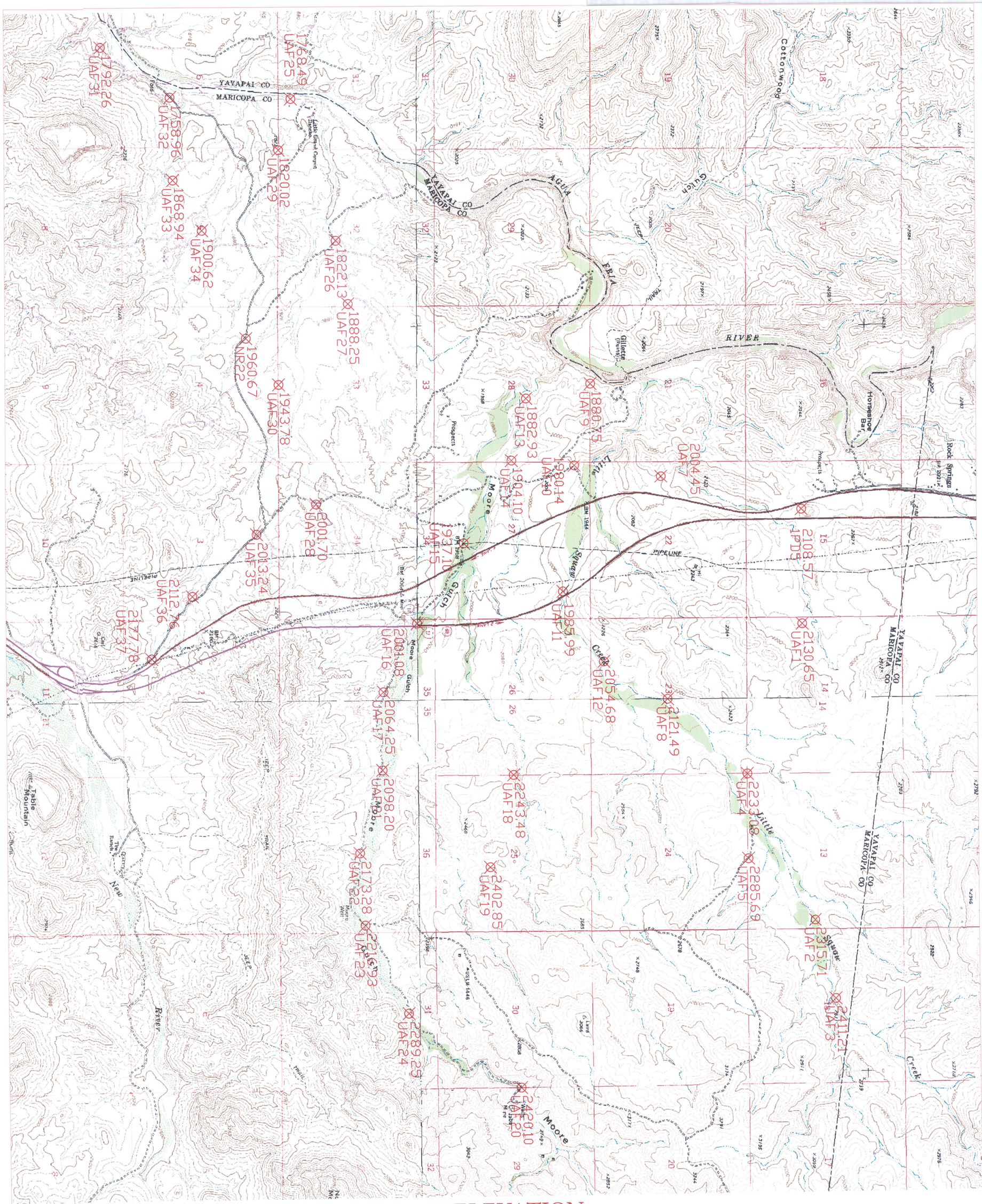
Station	NORTHING	EASTING	ELEVATION	DESCRIPTION
1NF2	1066007.651	652528.1818	2278.7707	CONTROL
1PD5	1104494.946	630307.2599	2108.57	CONTROL
NR22	1085699.644	624404.4377	1960.6711	CONTROL
UAF1	1104502.509	634161.6313	2130.6452	ERM
UAF2	1104872.571	644175.2528	2315.7147	ERM
UAF3	1105552.047	646840.7053	2411.2084	ERM
UAF4	1102609.161	639212.9543	2233.0835	ERM
UAF5	1102625.139	642076.8907	2285.6902	ERM
UAF6	1099893.005	625571.3332	1867.5184	ERM
UAF7	1099748.348	629164.6739	2004.4509	ERM
UAF8	1099929.841	636674.3075	2121.4878	ERM
UAF9	1097364.7	625985.1871	1880.7532	ERM
UAF10	1096802.502	628762.3369	1980.1432	ERM
UAF11	1096396.811	633019.545	1985.9912	ERM
UAF12	1097780.302	635393.7259	2054.6801	ERM
UAF13	1095174.727	626475.7918	1882.9301	ERM
UAF14	1094674.414	628586.4339	1904.1031	ERM
UAF15	1093045.67	631391.0145	1937.0971	ERM
UAF16	1091453.418	634064.9232	2001.0762	ERM
UAF17	1090298.131	636373.9742	2064.2524	ERM
UAF18	1094687.141	639193.5118	2243.4844	ERM
UAF19	1093876.418	642298.8339	2402.8454	ERM
UAF20	1094850.469	649697.8562	2420.102	ERM
UAF21	1090248.523	639007.0253	2098.1955	ERM
UAF22	1089462.907	641792.9618	2173.2756	ERM
UAF23	1089625.038	644218.1984	2216.9297	ERM
UAF24	1091072.217	647165.7883	2289.2503	ERM
UAF25	1087246.13	616338.7354	1768.4896	ERM
UAF26	1088754.872	621128.6931	1822.1323	ERM
UAF27	1089160.347	623262.3468	1888.2503	ERM
UAF28	1088053.021	630045.3256	2001.7016	ERM
UAF29	1086824.302	618067.1075	1820.0194	ERM
UAF30	1086800.104	625971.4413	1943.7818	ERM
UAF31	1080806.249	614567.9439	1792.259	ERM
UAF32	1083153.46	616269.5391	1758.9576	ERM
UAF33	1083245.303	619067.2601	1868.9386	ERM
UAF34	1084224.011	620767.8055	1900.6231	ERM
UAF35	1086033.413	631044.236	2013.2403	ERM
UAF36	1083849.549	633103.2629	2112.7644	ERM
UAF37	1082459.221	635196.0445	2177.7843	ERM

45-100648.002 Upper Agua Fria ERMs
Adjusted positions and ellipsoid heights

Station	Latitude	Longitude	Ellip Ht	Geoid Ht
1NF2	33-55-48.584171	112-04-23.431539	2185.3273	-93.4433
1PD5	34-02-08.935320	112-08-48.189900	2015.8482	-92.7218
NR22	33-59-02.852805	112-09-57.791437	1867.026	-93.6451
UAF1	34-02-09.093464	112-08-02.387174	2038.0465	-92.5987
UAF2	34-02-12.948897	112-06-03.399277	2223.5297	-92.185
UAF3	34-02-19.717425	112-05-31.738067	2319.1689	-92.0395
UAF4	34-01-50.464227	112-07-02.316254	2140.5999	-92.4835
UAF5	34-01-50.676524	112-06-28.285385	2193.3285	-92.3617
UAF6	34-01-23.298640	112-09-44.337377	1774.4642	-93.0542
UAF7	34-01-21.950745	112-09-01.638860	1911.4949	-92.956
UAF8	34-01-23.906925	112-07-32.417154	2028.7979	-92.6899
UAF9	34-00-58.295435	112-09-39.348488	1787.6028	-93.1503
UAF10	34-00-52.797794	112-09-06.338895	1887.0531	-93.0902
UAF11	34-00-48.877990	112-08-15.751083	1893.0258	-92.9654
UAF12	34-01-02.614961	112-07-47.579379	1961.8561	-92.824
UAF13	34-00-36.641131	112-09-33.458169	1789.7034	-93.2267
UAF14	34-00-31.740181	112-09-08.370527	1810.9211	-93.182
UAF15	34-00-15.689230	112-08-35.010472	1843.9409	-93.1562
UAF16	33-59-59.994015	112-08-03.206983	1907.9519	-93.1243
UAF17	33-59-48.612135	112-07-35.751069	1971.1688	-93.0837
UAF18	34-00-32.089572	112-07-02.362837	2150.686	-92.7984
UAF19	34-00-24.127530	112-06-25.454825	2310.1443	-92.701
UAF20	34-00-33.891401	112-04-57.578028	2327.7846	-92.3175
UAF21	33-59-48.173608	112-07-04.474657	2005.2113	-92.9842
UAF22	33-59-40.454197	112-06-31.365977	2080.3747	-92.9008
UAF23	33-59-42.102232	112-06-02.563326	2124.1408	-92.7889
UAF24	33-59-56.470554	112-05-27.581926	2196.655	-92.5953
UAF25	33-59-17.948032	112-11-33.630225	1674.6844	-93.8052
UAF26	33-59-32.998322	112-10-36.786762	1728.5025	-93.6298
UAF27	33-59-37.062650	112-10-11.456603	1794.6946	-93.5557
UAF28	33-59-26.266068	112-08-50.862300	1908.3138	-93.3878
UAF29	33-59-13.820368	112-11-13.089642	1726.2397	-93.7796
UAF30	33-59-13.777252	112-09-39.212608	1850.2216	-93.5602
UAF31	33-58-14.189170	112-11-54.451147	1698.1916	-94.0674
UAF32	33-58-37.456490	112-11-34.321079	1665.0055	-93.9521
UAF33	33-58-38.438436	112-11-01.100573	1775.0611	-93.8776
UAF34	33-58-48.164381	112-10-40.935904	1806.824	-93.7991
UAF35	33-59-06.307667	112-08-38.944933	1919.8128	-93.4275
UAF36	33-58-44.746653	112-08-14.435472	2019.3273	-93.4371
UAF37	33-58-31.035620	112-07-49.548270	2084.3691	-93.4153
		Average:	-93.119	

45-100648.002 Upper Agua Fria ERMs
Station Coordinate Error Ellipses
Confidence Region = 95%

Station	Semi-Major	Semi-Minor	Azimuth of	Elev
1NF2	0.01736	0.01642	169-34	0.02399
1PD5	0	0	0-00	0
NR22	0.01976	0.01914	170-33	0.02375
UAF1	0.04414	0.03876	168-08	0.05174
UAF2	0.04174	0.04062	119-47	0.05524
UAF3	0.04677	0.04435	141-34	0.07149
UAF4	0.04052	0.03941	6-31	0.0484
UAF5	0.04115	0.03868	31-00	0.04914
UAF6	0.03687	0.03632	3-13	0.04603
UAF7	0.03747	0.03445	6-39	0.04708
UAF8	0.04105	0.04044	106-32	0.04711
UAF9	0.04146	0.03916	16-00	0.05246
UAF10	0.04397	0.04004	160-14	0.04661
UAF11	0.04031	0.03872	18-23	0.04358
UAF12	0.04179	0.04055	119-32	0.0487
UAF13	0.04038	0.03811	19-55	0.04301
UAF14	0.04408	0.04092	175-12	0.05409
UAF15	0.04647	0.04154	166-29	0.05145
UAF16	0.04084	0.04027	10-08	0.04364
UAF17	0.03439	0.03353	9-20	0.03809
UAF18	0.04763	0.04085	171-49	0.05631
UAF19	0.04217	0.03952	148-35	0.04973
UAF20	0.05277	0.04639	135-25	0.08945
UAF21	0.04408	0.04256	32-51	0.05357
UAF22	0.04697	0.04556	59-29	0.07453
UAF23	0.04653	0.04499	133-02	0.06977
UAF24	0.04878	0.04558	179-00	0.06849
UAF25	0.04651	0.04443	131-33	0.0577
UAF26	0.04723	0.04217	0-54	0.06985
UAF27	0.04817	0.04103	174-25	0.06406
UAF28	0.06144	0.05286	153-07	0.0797
UAF29	0.04592	0.04291	124-03	0.06257
UAG30	0.05151	0.04488	0-58	0.07885
UAF31	0.04291	0.04165	106-48	0.05791
UAF32	0.04575	0.04474	75-41	0.0566
UAF33	0.04326	0.04139	57-25	0.05002
UAF34	0.04548	0.04218	161-23	0.04912
UAF35	0.04836	0.04386	146-24	0.06779
UAF36	0.04682	0.04515	153-21	0.07312
UAF37	0.05361	0.04984	157-35	0.10018



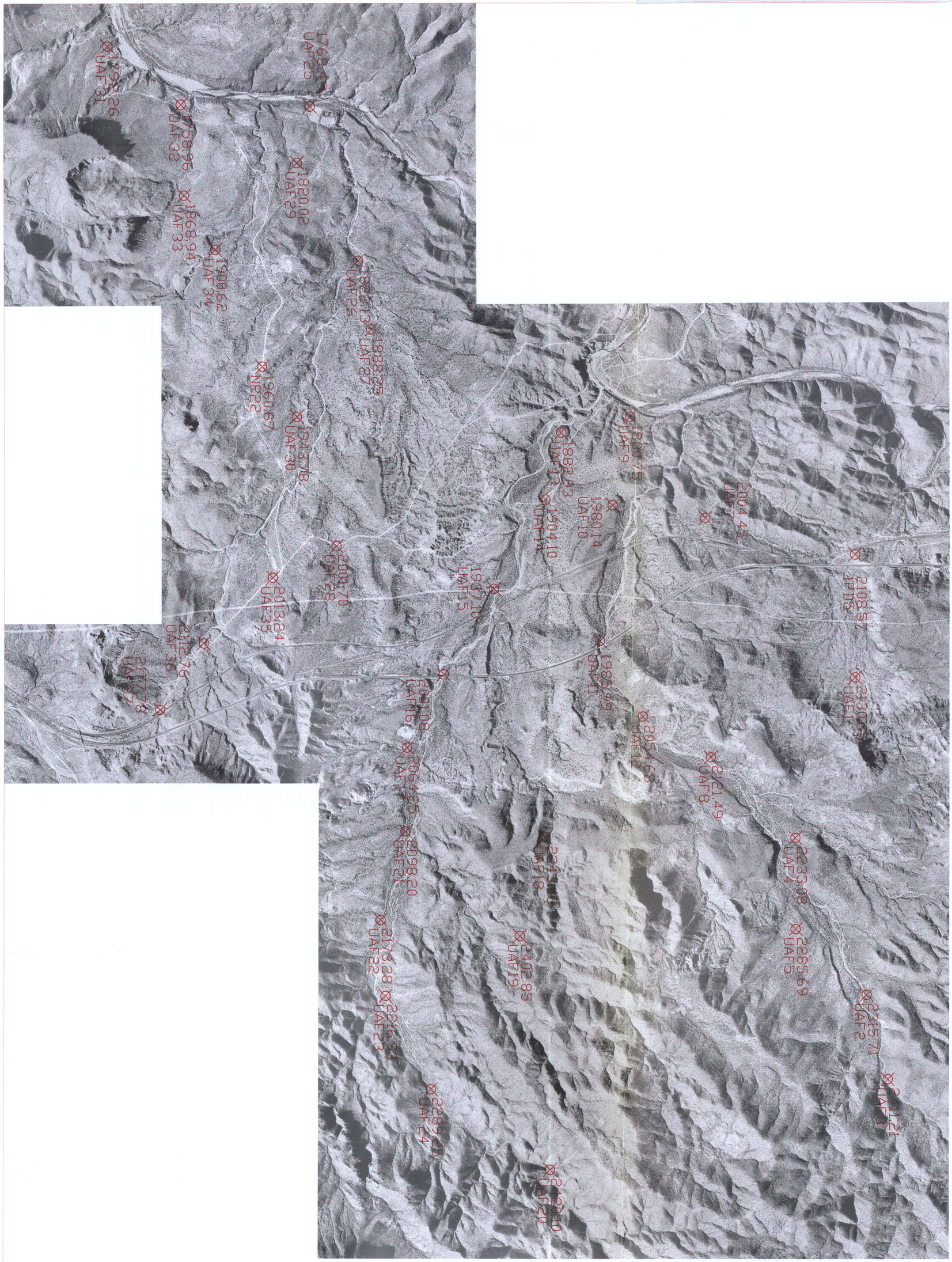
RBF CONSULTING

PLANNING ■ DESIGN ■ CONSTRUCTION

16605 NORTH 28th AVENUE, SUITE 100
PHOENIX, ARIZONA 85032-2602
602.467.2200 ▪ FAX 602.467.2201 ▪ www.RBF.com

ELEVATION REFERENCE MONUMENTS

SCALE: 1"=2000'



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PLANNING ■ DESIGN ■ CONSTRUCTION

16605 NORTH 28th AVENUE, SUITE 100
PHOENIX, ARIZONA 85032-2602
602.467.2200 ▪ FAX 602.467.2201 ▪ www.RBF.com

ELEVATION REFERENCE MONUMENTS

SCALE: 1"=2000'

STAR*NET-PRO Version 6.0.18
Copyright 1988-2000 Starplus Software, Inc.
Licensed for Use by Robdrt Bein, William Frost & Associates
Run Date: Thu May 30 2002 09:52:28

Summary of Files Used and Option Settings

Project Folder and Data Files

```
Project Name     648_U
Project Folder   C:\STAR\45100648
Data File List   648_u.dat
                 648.gps
```

Project Option Settings

```
STAR*NET Run Mode                    : Adjust with Error Propagation
Type of Adjustment                   : 3D
Project Units                        : FeetInt; DMS
Coordinate System                    : Mercator NAD83; AZ Central 0202
Geoid Height Model                   : GEO99W.GHT
Vertical Deflection                  : N=0.00 E=0.00 (Defaults, Seconds)
Longitude Sign Convention            : Positive West
Input/Output Coordinate Order        : North-East
Angle Data Station Order             : At-From-To
Distance/Vertical Data Type          : Slope/Zenith
Convergence Limit; Max Iterations    : 0.0100; 10
Default Coefficient of Refraction    : 0.0700
Create Coordinate File               : Yes
Create Geodetic Position File        : Yes
Create Ground Scale Coordinate File  : No
Create Dump File                     : Yes
GPS Vector Standard Error Factors    : 5.0000
GPS Vector Centering (Meters)        : 0.00500
GPS Vector Transformations           : None
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Summary of Unadjusted Input Observations

Number of Entered Stations (FeetInt) = 3

Fixed Stations	Latitude	Longitude	Elev	Description
1PD5	34-02-08.935320	112-08-48.189900	2108.5700	CONTROL

Free Stations	Latitude	Longitude	Elev	Description
NR22	33-59-02.852790	112-09-57.791420	1960.7090	CHK
1NF2	33-55-48.584490	112-04-23.431700	2278.8090	CHK

Number of GPS Vector Observations (FeetInt) = 114

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From                              DeltaX          CovarXX          CovarXY
To                                DeltaY          CovarYY          CovarXZ
                                  DeltaZ          CovarZZ          CovarYZ
(V1 Postprocessed 21-MAY-2002 10:17:15.000 all vectors.asc)
1NF2                            2937.2190   1.3831625E-003   8.0191133E-004
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UAF3                        22541.8279   2.7151964E-003  -7.8845644E-004
                            32863.6547   2.1285633E-003  -1.3804715E-003
(V2 Postprocessed 21-MAY-2002 11:14:15.000 all vectors.asc)
1PD5                         7822.0285   8.1267524E-004   2.9062558E-004
UAF4                        -4421.1853   1.2916693E-003  -9.9566171E-005
                            -1477.7055   7.6154666E-004  -2.0451430E-004
(V3 Postprocessed 21-MAY-2002 11:14:15.000 all vectors.asc)
1NF2                        -4693.4665   1.6145866E-003   1.1409745E-003
UAF4                        24014.1741   3.5036528E-003  -3.9557371E-004
                            30312.8321   1.4181452E-003  -8.0729328E-004
(V4 Postprocessed 21-MAY-2002 11:49:00.000 all vectors.asc)
1PD5                        10463.8938   7.8307448E-004   2.5026092E-004
UAF5                        -5528.8119   1.2593775E-003  -9.4184216E-005
                            -1430.4203   8.4496697E-004  -2.7178874E-004
(V5 Postprocessed 21-MAY-2002 11:49:00.000 all vectors.asc)
1NF2                        -2051.6146   1.0360264E-003   5.1128574E-004
UAF5                        22906.5535   1.9993964E-003  -1.8836843E-004
                            30360.1401   1.1678843E-003  -5.5165041E-004
(V6 Postprocessed 21-MAY-2002 01:22:00.000 all vectors.asc)
1PD5                         8805.9019   1.0171895E-003   5.0590379E-004
UAF19                      -10243.6391   2.3438415E-003  -3.8750078E-004
                            -8617.6313   1.5177114E-003  -8.5842186E-004
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1NF2                        -3709.6007   1.2055580E-003   7.3194591E-004
UAF19                       18191.6671   3.2695378E-003  -5.4626845E-004
                            23172.8860   1.9159761E-003  -1.2701414E-003
(V8 Postprocessed 21-MAY-2002 02:20:15.000 all vectors.asc)
1PD5                         6146.2081   8.4496697E-004   3.1215340E-004
UAF18                       -8534.3558   1.6845520E-003  -1.0494813E-004
                            -8039.5391   1.3239610E-003  -2.7447972E-004
(V9 Postprocessed 21-MAY-2002 02:20:15.000 all vectors.asc)
1NF2                        -6369.3301   1.4100723E-003   9.2031434E-004
UAF18                       19900.9780   3.6920213E-003  -3.3906318E-004
                            23750.9910   2.6694498E-003  -7.8845644E-004
(V10 Postprocessed 22-MAY-2002 07:21:00.000 all vectors.asc)
NR22                         8015.9356   7.0772711E-004   1.3993084E-004
UAF15                        1202.0802   9.6606096E-004  -2.0182332E-004
                             6092.1681   1.2243948E-003  -3.0138949E-004
(V11 Postprocessed 22-MAY-2002 07:32:30.000 all vectors.asc)
1NF2                       -13848.7392   2.1635460E-003   1.2459226E-003
UAF15                       22216.0832   4.4966236E-003  -1.7114618E-003
                            22205.0052   6.3318703E-003  -2.4514806E-003
(V12 Postprocessed 22-MAY-2002 07:50:15.000 all vectors.asc)
NR22                        10141.9414   6.9696320E-004   1.1571204E-004
UAF16                        -678.1607   9.4991509E-004  -7.2656395E-005
                             4812.5430   7.2118200E-004  -1.4800377E-004
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1NF2                       -11722.7215   1.5769129E-003   7.4809177E-004
UAF16                       20335.8369   3.1376799E-003  -4.8975792E-004
                            20925.3354   1.7195347E-003  -9.4453314E-004
(V14 Postprocessed 22-MAY-2002 08:15:15.000 all vectors.asc)
NR22                        12021.3929   7.1580004E-004   1.2647595E-004
UAF17                       -2193.6540   9.9835269E-004  -6.9965418E-005
                             3893.8901   7.1310907E-004  -1.6953159E-004
(V15 Postprocessed 22-MAY-2002 08:15:15.000 all vectors.asc)
1NF2                        -9843.2863   1.0171895E-003   3.4175416E-004
UAF17                       18820.3524   1.8352467E-003  -1.8836843E-004
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                              20006.6998   1.0144986E-003  -4.7899401E-004
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NR22                          14441.1727   6.7274440E-004   8.6111283E-005
UAF21                         -3234.5184   8.0460230E-004  -5.1128574E-005
                               3876.2020   6.9696320E-004  -1.1840301E-004
(V17 Postprocessed 22-MAY-2002 08:40:45.000 all vectors.asc)
1NF2                          -7423.4965   1.6576422E-003   7.3463689E-004
UAF21                         17779.4663   2.7313423E-003  -4.1441055E-004
                              19989.0062   1.8325557E-003  -9.7413389E-004
(V18 Postprocessed 22-MAY-2002 09:05:30.000 all vectors.asc)
NR22                          16836.3686   1.6145866E-003   7.9383839E-004
UAF22                         -4746.0154   2.7044325E-003  -4.6553913E-004
                               3271.1903   1.9536497E-003  -1.2163219E-003
(V19 Postprocessed 22-MAY-2002 09:05:30.000 all vectors.asc)
1NF2                          -5028.2816   1.5096384E-003   7.6154666E-004
UAF22                         16267.9878   2.4487896E-003  -4.5746619E-004
                              19383.9941   1.8567745E-003  -1.1275196E-003
(V20 Postprocessed 22-MAY-2002 09:30:30.000 all vectors.asc)
NR22                          19104.9109   1.2835963E-003   6.3776169E-004
UAF23                         -5606.0314   2.1662370E-003  -5.4626845E-004
                               3433.8028   1.7760452E-003  -1.0602452E-003
(V21 Postprocessed 22-MAY-2002 09:30:30.000 all vectors.asc)
1NF2                          -2759.7502   1.6199685E-003   9.3107825E-004
UAF23                         15407.9736   2.9600754E-003  -7.9114742E-004
                              19546.6027   2.3519144E-003  -1.5796039E-003
(V22 Postprocessed 22-MAY-2002 10:09:45.000 all vectors.asc)
NR22                          25212.7133   1.6226595E-003   1.0414083E-003
UAF20                         -5107.3052   3.3072115E-003  -1.0333354E-003
                               7888.2478   2.6317761E-003  -1.8164099E-003
(V23 Postprocessed 22-MAY-2002 10:09:45.000 all vectors.asc)
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UAF20                         15906.7026   3.6597295E-003  -1.1678843E-003
                              24001.0514   2.9035648E-003  -2.0451430E-003
(V24 Postprocessed 22-MAY-2002 10:46:30.000 all vectors.asc)
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UAF24                         -6017.1627   2.2980949E-003  -3.3906318E-004
                               4678.6847   1.2405407E-003  -5.7586921E-004
(V25 Postprocessed 22-MAY-2002 10:46:30.000 all vectors.asc)
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UAF24                         14996.8480   3.1618987E-003  -4.9244890E-004
                              20791.4619   1.5903678E-003  -8.5303990E-004
(V26 Postprocessed 22-MAY-2002 12:00:45.000 all vectors.asc)
NR22                          10209.7824   6.4852560E-004   1.1033008E-004
UAF11                          2291.5899   8.8264065E-004  -5.1128574E-005
                               8901.0200   7.7500155E-004  -1.8567745E-004
(V27 Postprocessed 22-MAY-2002 12:00:45.000 all vectors.asc)
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UAF11                         23305.6060   3.0354227E-003  -3.6059100E-004
                              25013.8234   2.2738761E-003  -1.3939264E-003
(V28 Postprocessed 22-MAY-2002 01:37:30.000 all vectors.asc)
NR22                           6350.4764   6.0008801E-004   5.1128574E-005
UAF10                          4106.8977   7.6423764E-004  -3.7673686E-005
                               9226.1649   6.6198049E-004  -8.6111283E-005
(V29 Postprocessed 22-MAY-2002 01:37:30.000 all vectors.asc)
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UAF10                         25120.9308   2.6398490E-003  -3.4175416E-004
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UAF34                      21662.9026   2.8201445E-003  -3.9019175E-004
                           14847.7814   1.8164099E-003  -8.2074817E-004
(V31 Postprocessed 22-MAY-2002 07:40:40.000 all vectors.asc)
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UAF34                         648.9073   8.0460230E-004  -4.3055642E-005
                            -1264.9975   6.8081733E-004  -9.4184216E-005
(V32 Postprocessed 14-MAY-2002 12:24:50.000 all vectors.asc)
1PD5                      -11703.9271   1.2593775E-003   7.5078275E-004
UAF26                      -4498.0834   2.9412385E-003  -3.3637220E-004
                          -13228.2657   1.6253505E-003  -1.0494813E-003
(V33 Postprocessed 14-MAY-2002 02:31:15.000 all vectors.asc)
1PD5                      -13008.3939   1.0575542E-003   3.5790002E-004
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                          -16942.7107   1.5607670E-003  -6.0546996E-004
(V34 Postprocessed 14-MAY-2002 01:18:50.000 all vectors.asc)
1PD5                       -9662.6343   1.4181452E-003   1.0737001E-003
UAF27                      -5141.0038   2.7205784E-003  -7.4809177E-004
                          -12850.5398   1.8298648E-003  -1.2028670E-003
(V35 Postprocessed 14-MAY-2002 11:27:30.000 all vectors.asc)
1PD5                       -7661.8612   3.1538258E-003   2.8901099E-003
UAF30                      -7426.9516   6.8915936E-003  -9.1493239E-004
                          -14771.3290   2.2469663E-003  -1.7249166E-003
(V36 Postprocessed 14-MAY-2002 10:48:55.000 all vectors.asc)
1PD5                       -3642.8881   1.3374159E-003   6.9965418E-004
UAF28                      -8353.2975   2.7017415E-003  -7.8576546E-004
                          -13691.9842   2.2711851E-003  -1.3293429E-003
(V37 Postprocessed 14-MAY-2002 10:14:50.000 all vectors.asc)
1PD5                       -3142.0180   1.3831625E-003   7.4001884E-004
UAF35                      -9785.1633   2.4299528E-003  -7.1580004E-004
                          -15358.5485   1.9967054E-003  -1.2486136E-003
(V38 Postprocessed 14-MAY-2002 09:40:25.000 all vectors.asc)
1PD5                       -1720.2535   1.6414963E-003   8.0998426E-004
UAF36                     -11768.0554   2.1393272E-003  -3.9557371E-004
                          -17110.4826   1.3643256E-003  -7.8576546E-004
(V39 Postprocessed 14-MAY-2002 08:45:30.000 all vectors.asc)
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UAF37                     -13325.5093   5.9685883E-003  -7.8845644E-004
                          -18223.6574   2.4353347E-003  -2.1958377E-003
(V40 Postprocessed 16-MAY-2002 03:06:30.000 all vectors.asc)
1PD5                       -3582.2860   7.6692862E-004   3.2022633E-004
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                           -8258.9068   9.9027976E-004  -4.2517446E-004
(V41 Postprocessed 16-MAY-2002 07:58:45.000 all vectors.asc)
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UAF17                      -9615.0019   8.4227599E-004  -9.6875194E-005
                          -11783.8509   8.5842186E-004  -1.4531279E-004
(V42 Postprocessed 16-MAY-2002 10:19:45.000 all vectors.asc)
1PD5                        6146.2042   9.2569630E-004   3.5790002E-004
UAF18                      -8534.3332   1.4585099E-003  -3.6328198E-004
                           -8039.5137   1.2916693E-003  -6.3237974E-004
(V43 Postprocessed 16-MAY-2002 08:52:45.000 all vectors.asc)
1PD5                        8805.9049   6.9427222E-004   1.0494813E-004
UAF19                     -10243.6168   8.9071359E-004  -5.6510530E-005
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(V44 Postprocessed 16-MAY-2002 12:45:00.000 all vectors.asc)
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                            -7789.4327   2.8524363E-003  -2.8309084E-003
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                            -6046.5421   9.3107825E-004  -4.3055642E-004
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                            -7859.9591   7.4540080E-004  -1.3723986E-004
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1PD5                          860.6938   6.7543538E-004   9.6875194E-005
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                            -6776.7265   6.7812636E-004  -1.3993084E-004
(V49 Postprocessed 17-MAY-2002 09:58:30.000 all vectors.asc)
1PD5                         3328.8142   7.3463689E-004   1.7222257E-004
UAF12                       -5356.4951   9.8758878E-004  -1.5876768E-004
                            -5587.0764   8.9071359E-004  -3.0138949E-004
(V50 Postprocessed 17-MAY-2002 10:52:00.000 all vectors.asc)
1PD5                         4943.9212   7.5885568E-004   1.7491354E-004
UAF8                        -4773.0196   1.0387174E-003  -1.6684061E-004
                            -3765.4888   8.5842186E-004  -2.3949701E-004
(V51 Postprocessed 17-MAY-2002 08:46:05.000 all vectors.asc)
1PD5                       -16440.7018   1.9132851E-003   9.4991509E-004
UAF25                       -3436.8640   3.7539138E-003  -4.8706695E-004
                           -14519.8867   1.8809933E-003  -1.2432317E-003
(V52 Postprocessed 17-MAY-2002 08:19:10.000 all vectors.asc)
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UAF29                       -4345.7061   3.1403709E-003  -5.1935868E-004
                           -14837.0474   1.6361144E-003  -9.6067900E-004
(V53 Postprocessed 17-MAY-2002 09:20:45.000 all vectors.asc)
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UAF33                       -6615.7972   2.1608550E-003  -3.9557371E-004
                           -17775.8769   1.6953159E-003  -9.8489780E-004
(V54 Postprocessed 17-MAY-2002 09:59:35.000 all vectors.asc)
1PD5                       -17355.8613   1.3993084E-003   7.8038351E-004
UAF32                       -5526.0114   2.6479220E-003  -7.2118200E-004
                           -17919.7017   2.1904558E-003  -1.4423640E-003
(V55 Postprocessed 17-MAY-2002 10:39:20.000 all vectors.asc)
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                           -19851.8575   1.5876768E-003  -9.1493239E-004
(V56 Postprocessed 17-MAY-2002 11:33:15.000 all vectors.asc)
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UAF15                       -6219.2356   1.4019993E-003  -1.1840301E-004
                            -9585.5583   8.0729328E-004  -2.4218798E-004
(V57 Postprocessed 17-MAY-2002 12:12:50.000 all vectors.asc)
1PD5                          792.7963   6.9158124E-004   1.2378497E-004
UAF16                       -8099.4379   9.0685945E-004  -1.8836843E-005
                           -10865.2092   7.4001884E-004  -1.5069475E-004
(V58 Postprocessed 17-MAY-2002 12:37:50.000 all vectors.asc)
1PD5                         2672.2067   1.0387174E-003   5.0321281E-004
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UAF17                        -9614.9044   1.5796039E-003  -1.9644137E-004
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                            -12243.9741   1.6307324E-003  -8.8802261E-004
(V62 Postprocessed 20-MAY-2002 02:02:45.000 all vectors.asc)
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                             -6451.5946   1.2943602E-003  -3.8211882E-004
(V63 Postprocessed 20-MAY-2002 09:44:15.000 all vectors.asc)
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UAF4                         -4421.1876   1.0952279E-003  -1.8567745E-004
                             -1477.7703   9.6875194E-004  -3.7942784E-004
(V64 Postprocessed 20-MAY-2002 09:11:00.000 all vectors.asc)
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                             -1430.4754   1.0817730E-003  -4.7899401E-004
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                               452.5049   1.4558189E-003  -6.7543538E-004
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                              1073.0751   1.3562527E-003  -7.1580004E-004
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                             -3958.7146   8.1267524E-004  -2.3949701E-004
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UAF6                         28011.5639   2.8255265E-003  -3.3637220E-004
                             27831.7968   1.4531279E-003  -8.6649479E-004
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                                25.6627   8.4765795E-004  -2.9331656E-004
(V70 Postprocessed 21-MAY-2002 11:00:25.000 all vectors.asc)
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                             31816.1916   1.5177114E-003  -9.2569630E-004
(V71 Postprocessed 21-MAY-2002 12:16:00.000 all vectors.asc)
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                             -3994.9854   1.1759572E-003  -5.1666770E-004
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                           14680.0304   2.1823828E-003  -1.6818610E-003
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                          -15358.6544   2.0478340E-003  -1.1140647E-003
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                          -14771.4023   2.1420182E-003  -1.3293429E-003
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                           17019.1388   2.4003520E-003  -1.5876768E-003
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                            -3765.4624   8.8264065E-004  -2.7717069E-004
(V90 Postprocessed 21-MAY-2002 08:40:30.000 all vectors.asc)
1NF2                        -7571.5689   1.5876768E-003   6.8081733E-004
UAF8                        23662.3208   2.8147626E-003  -3.7942784E-004
                            28025.0441   1.7410625E-003  -9.7144292E-004
(V91 Postprocessed 21-MAY-2002 09:31:15.000 all vectors.asc)
1PD5                        12869.4063   8.3689403E-004   2.5564287E-004
UAF2                        -5172.5767   1.2163219E-003  -2.0989625E-004
                              452.4868   1.0387174E-003  -4.4132033E-004
(V92 Postprocessed 21-MAY-2002 09:31:15.000 all vectors.asc)
1NF2                          353.9254   1.1786482E-003   5.4895943E-004
UAF2                        23262.7915   1.9832505E-003  -4.4939326E-004
                            32243.0412   1.6011317E-003  -9.3646021E-004
(V93 Postprocessed 21-MAY-2002 10:17:15.000 all vectors.asc)
1PD5                        15452.7334   1.6791700E-003   1.0844640E-003
UAF3                        -5893.5299   3.4848160E-003  -1.0629362E-003
                             1073.0979   2.6802137E-003  -1.8702294E-003
(V94 Postprocessed 22-MAY-2002 08:19:25.000 all vectors.asc)
1NF2                       -27294.1367   1.3185790E-003   5.4357748E-004
UAF33                       21819.6482   2.4111159E-003  -2.9331656E-004
                            14014.6751   1.3051241E-003  -7.0772711E-004
(V95 Postprocessed 22-MAY-2002 08:19:25.000 all vectors.asc)
NR22                        -5429.4763   6.6736245E-004   9.1493239E-005
UAF33                         805.6068   8.3689403E-004  -4.8437597E-005
                            -2098.0955   6.6198049E-004  -1.1302106E-004
(V96 Postprocessed 22-MAY-2002 08:47:15.000 all vectors.asc)
NR22                        -8006.6946   7.4001884E-004   1.2647595E-004
UAF32                        1895.3953   9.3646021E-004  -7.2656395E-005
                            -2241.9204   7.8576546E-004  -1.8298648E-004
(V97 Postprocessed 22-MAY-2002 08:47:15.000 all vectors.asc)
1NF2                       -29871.3767   2.1689279E-003   1.0279534E-003
UAF32                       22909.4159   3.7646777E-003  -5.9739703E-004
                            13870.8517   2.6021753E-003  -1.5150204E-003
(V98 Postprocessed 22-MAY-2002 09:21:35.000 all vectors.asc)
1NF2                       -31948.1689   1.6172775E-003   9.3915118E-004
UAF31                       22307.3286   3.1349889E-003  -7.2118200E-004
                            11938.7433   2.4326438E-003  -1.7195347E-003
(V99 Postprocessed 22-MAY-2002 09:21:35.000 all vectors.asc)
NR22                       -10083.4798   7.5885568E-004   1.8836843E-004
UAF31                        1293.3525   1.0629362E-003  -1.4262181E-004
                            -4174.0779   9.0955043E-004  -3.4175416E-004
(V100 Postprocessed 22-MAY-2002 10:01:10.000 all vectors.asc)
NR22                        -5594.1678   8.1267524E-004   2.6102483E-004
UAF29                        3075.6541   1.2136309E-003  -2.6371581E-004
                              840.6696   1.0844640E-003  -4.6284815E-004
(V101 Postprocessed 22-MAY-2002 10:01:10.000 all vectors.asc)
1NF2                       -27458.8662   1.4881106E-003   9.2031434E-004
UAF29                       24089.6398   3.0434957E-003  -9.3107825E-004
                            16953.4918   2.5322099E-003  -1.7249166E-003
(V102 Postprocessed 22-MAY-2002 10:31:10.000 all vectors.asc)
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NR22                        -7091.6200   7.7500155E-004   1.8836843E-004
UAF25                        3984.5340   1.1113738E-003  -1.5876768E-004
                             1157.8756   8.7187674E-004  -2.5026092E-004
(V103 Postprocessed 22-MAY-2002 10:31:10.000 all vectors.asc)
1NF2                       -28956.3050   1.3131971E-003   6.1892485E-004
UAF25                       24998.5436   2.3492234E-003  -5.4357748E-004
                            17270.6560   1.6361144E-003  -8.1267524E-004
(V104 Postprocessed 22-MAY-2002 11:12:10.000 all vectors.asc)
1NF2                       -16097.7881   1.8971392E-003   1.4638918E-003
UAF14                       24140.9032   4.9352529E-003  -4.9244890E-004
                            23531.7359   1.7114618E-003  -1.1759572E-003
(V105 Postprocessed 22-MAY-2002 11:12:10.000 all vectors.asc)
NR22                         5766.8789   8.0998426E-004   2.9600754E-004
UAF14                        3126.9277   1.4019993E-003  -9.9566171E-005
                             7418.9297   7.7231057E-004  -2.3411505E-004
(V106 Postprocessed 22-MAY-2002 11:33:40.000 all vectors.asc)
1NF2                       -17942.9037   1.1329016E-003   6.2699778E-004
UAF13                       25210.3858   2.2900219E-003  -2.2066016E-004
                            23930.5404   1.1813392E-003  -5.8394214E-004
(V107 Postprocessed 22-MAY-2002 11:33:40.000 all vectors.asc)
NR22                         3921.7810   7.5885568E-004   2.3142407E-004
UAF13                        4196.3836   1.1813392E-003  -8.3420306E-005
                             7817.7336   7.7231057E-004  -2.1527821E-004
(V108 Postprocessed 22-MAY-2002 11:57:50.000 all vectors.asc)
1NF2                       -17939.5751   1.3374159E-003   8.2074817E-004
UAF9                        26533.2466   3.1080791E-003  -3.5790002E-004
                            25744.0301   2.0182332E-003  -1.2378497E-003
(V109 Postprocessed 22-MAY-2002 11:57:50.000 all vectors.asc)
NR22                         3925.0871   7.5347373E-004   2.1796919E-004
UAF9                         5519.2377   1.2109399E-003  -9.4184216E-005
                             9631.2271   9.2569630E-004  -3.2022633E-004
(V110 Postprocessed 22-MAY-2002 12:39:30.000 all vectors.asc)
1NF2                       -17791.0048   1.5876768E-003   1.3670166E-003
UAF6                        28011.5096   3.5305626E-003  -9.2569630E-004
                            27831.7577   2.3303866E-003  -1.7410625E-003
(V111 Postprocessed 22-MAY-2002 12:39:30.000 all vectors.asc)
NR22                         4073.6763   7.2118200E-004   2.3142407E-004
UAF6                         6997.5009   1.0306444E-003  -1.5876768E-004
                            11718.9627   8.4227599E-004  -2.8793460E-004
(V112 Postprocessed 22-MAY-2002 02:03:45.000 all vectors.asc)
1NF2                        -8948.2849   1.2001760E-003   4.9513988E-004
UAF1                        26973.7200   2.7501791E-003  -3.2560829E-004
                            31816.2340   2.1796919E-003  -5.8663312E-004
(V113 Postprocessed 22-MAY-2002 02:03:45.000 all vectors.asc)
NR22                        12916.3695   9.9027976E-004   3.3906318E-004
UAF1                         5959.6892   2.0370700E-003  -2.4218798E-004
                            15703.4552   1.7302986E-003  -3.9288273E-004
(V114 Postprocessed 22-MAY-2002 02:50:40.000 all vectors.asc)
1NF2                       -14533.6628   1.0790820E-003   6.7812636E-004
UAF7                        26480.1638   2.6721408E-003  -4.2786544E-004
                            27795.4735   1.9159761E-003  -1.1167557E-003
(V115 Postprocessed 22-MAY-2002 02:50:40.000 all vectors.asc)
NR22                         7330.9873   6.4583463E-004   1.3723986E-004
UAF7                         5466.1383   9.7144292E-004  -8.6111283E-005
                            11682.6837   8.1267524E-004  -2.2604212E-004
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Adjustment Statistical Summary

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Convergence Iterations = 3

Number of Stations = 40

Number of Observations = 342
Number of Unknowns = 117
Number of Redundant Obs = 225

Observation	Count	Sum Squares of StdRes	Error Factor
GPS Deltas	342	256.27	1.07
Total	342	256.27	1.07

Adjustment Passed the Chi Square Test at 5% Level

Adjusted Station Information

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Adjusted Coordinates (FeetInt)

Station	N	E	Elev	Description
1NF2	1066007.6506	652528.1818	2278.7707	CHK
1PD5	1104494.9463	630307.2599	2108.5700	CONTROL
NR22	1085699.6438	624404.4377	1960.6711	CHK
UAF1	1104502.5089	634161.6313	2130.6452	BM
UAF10	1096802.5018	628762.3369	1980.1432	BM
UAF11	1096396.8107	633019.5450	1985.9912	BM
UAF12	1097780.3018	635393.7259	2054.6801	BM
UAF13	1095174.7269	626475.7918	1882.9301	BM
UAF14	1094674.4143	628586.4339	1904.1031	BM
UAF15	1093045.6703	631391.0145	1937.0971	BM
UAF16	1091453.4177	634064.9232	2001.0762	BM
UAF17	1090298.1311	636373.9742	2064.2524	BM
UAF18	1094687.1410	639193.5118	2243.4844	BM
UAF19	1093876.4177	642298.8339	2402.8454	BM
UAF2	1104872.5713	644175.2528	2315.7147	BM
UAF20	1094850.4692	649697.8562	2420.1020	BM
UAF21	1090248.5225	639007.0253	2098.1955	BM
UAF22	1089462.9066	641792.9618	2173.2756	BM
UAF23	1089625.0377	644218.1984	2216.9297	BM
UAF24	1091072.2165	647165.7883	2289.2503	BM
UAF25	1087246.1298	616338.7354	1768.4896	BM
UAF26	1088754.8722	621128.6931	1822.1323	BM
UAF27	1089160.3470	623262.3468	1888.2503	BM
UAF28	1088053.0210	630045.3256	2001.7016	BM
UAF29	1086824.3020	618067.1075	1820.0194	BM
UAF3	1105552.0469	646840.7053	2411.2084	BM
UAF30	1086800.1038	625971.4413	1943.7818	BM
UAF31	1080806.2493	614567.9439	1792.2590	BM
UAF32	1083153.4602	616269.5391	1758.9576	BM
UAF33	1083245.3031	619067.2601	1868.9386	BM
UAF34	1084224.0111	620767.8055	1900.6231	BM
UAF35	1086033.4126	631044.2360	2013.2403	BM
UAF36	1083849.5487	633103.2629	2112.7644	BM

UAF37	1082459.2207	635196.0445	2177.7843	BM
UAF4	1102609.1610	639212.9543	2233.0835	BM
UAF5	1102625.1394	642076.8907	2285.6902	BM
UAF6	1099893.0045	625571.3332	1867.5184	BM
UAF7	1099748.3478	629164.6739	2004.4509	BM
UAF8	1099929.8411	636674.3075	2121.4878	BM
UAF9	1097364.6997	625985.1871	1880.7532	BM

Adjusted Positions and Ellipsoid Heights (FeetInt)

Station	Latitude	Longitude	Ellip Ht	Geoid Ht
1NF2	33-55-48.584171	112-04-23.431539	2185.3273	-93.4433
1PD5	34-02-08.935320	112-08-48.189900	2015.8482	-92.7218
NR22	33-59-02.852805	112-09-57.791437	1867.0260	-93.6451
UAF1	34-02-09.093464	112-08-02.387174	2038.0465	-92.5987
UAF10	34-00-52.797794	112-09-06.338895	1887.0531	-93.0902
UAF11	34-00-48.877990	112-08-15.751083	1893.0258	-92.9654
UAF12	34-01-02.614961	112-07-47.579379	1961.8561	-92.8240
UAF13	34-00-36.641131	112-09-33.458169	1789.7034	-93.2267
UAF14	34-00-31.740181	112-09-08.370527	1810.9211	-93.1820
UAF15	34-00-15.689230	112-08-35.010472	1843.9409	-93.1562
UAF16	33-59-59.994015	112-08-03.206983	1907.9519	-93.1243
UAF17	33-59-48.612135	112-07-35.751069	1971.1688	-93.0837
UAF18	34-00-32.089572	112-07-02.362837	2150.6860	-92.7984
UAF19	34-00-24.127530	112-06-25.454825	2310.1443	-92.7010
UAF2	34-02-12.948897	112-06-03.399277	2223.5297	-92.1850
UAF20	34-00-33.891401	112-04-57.578028	2327.7846	-92.3175
UAF21	33-59-48.173608	112-07-04.474657	2005.2113	-92.9842
UAF22	33-59-40.454197	112-06-31.365977	2080.3747	-92.9008
UAF23	33-59-42.102232	112-06-02.563326	2124.1408	-92.7889
UAF24	33-59-56.470554	112-05-27.581926	2196.6550	-92.5953
UAF25	33-59-17.948032	112-11-33.630225	1674.6844	-93.8052
UAF26	33-59-32.998322	112-10-36.786762	1728.5025	-93.6298
UAF27	33-59-37.062650	112-10-11.456603	1794.6946	-93.5557
UAF28	33-59-26.266068	112-08-50.862300	1908.3138	-93.3878
UAF29	33-59-13.820368	112-11-13.089642	1726.2397	-93.7796
UAF3	34-02-19.717425	112-05-31.738067	2319.1689	-92.0395
UAF30	33-59-13.777252	112-09-39.212608	1850.2216	-93.5602
UAF31	33-58-14.189170	112-11-54.451147	1698.1916	-94.0674
UAF32	33-58-37.456490	112-11-34.321079	1665.0055	-93.9521
UAF33	33-58-38.438436	112-11-01.100573	1775.0611	-93.8776
UAF34	33-58-48.164381	112-10-40.935904	1806.8240	-93.7991
UAF35	33-59-06.307667	112-08-38.944933	1919.8128	-93.4275
UAF36	33-58-44.746653	112-08-14.435472	2019.3273	-93.4371
UAF37	33-58-31.035620	112-07-49.548270	2084.3691	-93.4153
UAF4	34-01-50.464227	112-07-02.316254	2140.5999	-92.4835
UAF5	34-01-50.676524	112-06-28.285385	2193.3285	-92.3617
UAF6	34-01-23.298640	112-09-44.337377	1774.4642	-93.0542
UAF7	34-01-21.950745	112-09-01.638860	1911.4949	-92.9560
UAF8	34-01-23.906925	112-07-32.417154	2028.7979	-92.6899
UAF9	34-00-58.295435	112-09-39.348488	1787.6028	-93.1503
			Average:	-93.1190

Convergence Angles (DMS) and Grid Factors at Stations
(Grid Azimuth = Geodetic Azimuth - Convergence)
(Elevation Factor Includes a Geoid Height Correction at Each Station))

Station	Convergence Angle	Scale	x	Elevation	=	Combined
		------- Factors -------				
1NF2	-0-05-14.50	0.99990258		0.99989545		0.99979804
1PD5	-0-07-43.55	0.99990556		0.99990355		0.99980912
NR22	-0-08-21.83	0.99990654		0.99991067		0.99981722
UAF1	-0-07-17.91	0.99990496		0.99990249		0.99980746
UAF10	-0-07-53.45	0.99990581		0.99990972		0.99981553
UAF11	-0-07-25.14	0.99990514		0.99990943		0.99981457
UAF12	-0-07-09.42	0.99990478		0.99990614		0.99981092
UAF13	-0-08-08.56	0.99990619		0.99991437		0.99982057
UAF14	-0-07-54.51	0.99990584		0.99991336		0.99981920
UAF15	-0-07-35.80	0.99990539		0.99991178		0.99981718
UAF16	-0-07-17.97	0.99990498		0.99990872		0.99981370
UAF17	-0-07-02.58	0.99990463		0.99990569		0.99981033
UAF18	-0-06-44.03	0.99990423		0.99989710		0.99980135
UAF19	-0-06-23.37	0.99990381		0.99988948		0.99979330
UAF2	-0-06-11.32	0.99990357		0.99989362		0.99979720
UAF20	-0-05-34.24	0.99990290		0.99988863		0.99979154
UAF21	-0-06-45.09	0.99990426		0.99990406		0.99980833
UAF22	-0-06-26.55	0.99990388		0.99990047		0.99980436
UAF23	-0-06-10.45	0.99990356		0.99989837		0.99980195
UAF24	-0-05-50.93	0.99990320		0.99989490		0.99979811
UAF25	-0-09-15.47	0.99990801		0.99991987		0.99982790
UAF26	-0-08-43.75	0.99990712		0.99991730		0.99982443
UAF27	-0-08-29.60	0.99990674		0.99991413		0.99982088
UAF28	-0-07-44.50	0.99990560		0.99990870		0.99981431
UAF29	-0-09-03.97	0.99990769		0.99991741		0.99982510
UAF3	-0-05-53.62	0.99990324		0.99988904		0.99979229
UAF30	-0-08-11.49	0.99990627		0.99991148		0.99981776
UAF31	-0-09-26.85	0.99990836		0.99991875		0.99982711
UAF32	-0-09-15.69	0.99990803		0.99992034		0.99982837
UAF33	-0-08-57.13	0.99990750		0.99991507		0.99982258
UAF34	-0-08-45.90	0.99990719		0.99991355		0.99982075
UAF35	-0-07-37.77	0.99990544		0.99990815		0.99981360
UAF36	-0-07-24.00	0.99990512		0.99990339		0.99980852
UAF37	-0-07-10.05	0.99990481		0.99990028		0.99980509
UAF4	-0-06-44.24	0.99990423		0.99989759		0.99980183
UAF5	-0-06-25.19	0.99990384		0.99989506		0.99979891
UAF6	-0-08-14.81	0.99990634		0.99991510		0.99982145
UAF7	-0-07-50.92	0.99990574		0.99990855		0.99981430
UAF8	-0-07-01.00	0.99990459		0.99990293		0.99980753
UAF9	-0-08-11.93	0.99990627		0.99991447		0.99982075
Project Averages:	-0-07-29.48	0.99990535		0.99990623		0.99981159

Coordinate Changes from Entered Provisionals (FeetInt)

Station	dN	dE	dZ
1NF2	-0.0323	0.0135	-0.0383
1PD5	0.0000	0.0000	0.0000
NR22	0.0015	-0.0014	-0.0379

Adjusted Observations and Residuals

Adjusted GPS Vector Observations (FeetInt)

From To	Component	Adj Value	Residual	StdErr	StdRes
(V1 Postprocessed 21-MAY-2002 10:17:15.000 all vectors.asc)					
1NF2	Delta-N	39543.8784	-0.0229	0.0311	0.7
UAF3	Delta-E	-5749.0438	0.0251	0.0318	0.8
	Delta-U	95.5592	-0.0117	0.0652	0.2
	Length	39959.7167			
(V2 Postprocessed 21-MAY-2002 11:14:15.000 all vectors.asc)					
1PD5	Delta-N	-1866.1367	-0.0104	0.0276	0.4
UAF4	Delta-E	8911.6675	0.0394	0.0260	1.5
	Delta-U	122.7728	-0.0239	0.0378	0.6
	Length	9105.7870			
(V3 Postprocessed 21-MAY-2002 11:14:15.000 all vectors.asc)					
1NF2	Delta-N	36588.4063	-0.0221	0.0374	0.6
UAF4	Delta-E	-13373.7500	0.0045	0.0330	0.1
	Delta-U	-81.0949	0.0003	0.0636	0.0
	Length	38956.0681			
(V4 Postprocessed 21-MAY-2002 11:49:00.000 all vectors.asc)					
1PD5	Delta-N	-1843.7230	-0.0023	0.0272	0.1
UAF5	Delta-E	11776.1577	0.0243	0.0260	0.9
	Delta-U	174.0891	-0.0163	0.0383	0.4
	Length	11920.8856			
(V5 Postprocessed 21-MAY-2002 11:49:00.000 all vectors.asc)					
1NF2	Delta-N	36608.8623	-0.0331	0.0309	1.1
UAF5	Delta-E	-10509.3006	0.0041	0.0286	0.1
	Delta-U	-26.7694	-0.0044	0.0493	0.1
	Length	38087.4640			
(V6 Postprocessed 21-MAY-2002 01:22:00.000 all vectors.asc)					
1PD5	Delta-N	-10593.7447	0.0101	0.0309	0.3
UAF19	Delta-E	12017.8685	0.0091	0.0292	0.3
	Delta-U	288.1583	0.0012	0.0554	0.0
	Length	16023.0966			
(V7 Postprocessed 21-MAY-2002 01:22:00.000 all vectors.asc)					
1NF2	Delta-N	27858.8950	0.0445	0.0335	1.3
UAF19	Delta-E	-10273.9977	-0.0388	0.0314	1.2
	Delta-U	103.6886	-0.0066	0.0654	0.1
	Length	29693.1610			
(V8 Postprocessed 21-MAY-2002 02:20:15.000 all vectors.asc)					
1PD5	Delta-N	-9789.7569	0.0138	0.0346	0.4
UAF18	Delta-E	8910.0252	-0.0035	0.0273	0.1
	Delta-U	130.6452	-0.0028	0.0437	0.1
	Length	13238.0118			
(V9 Postprocessed 21-MAY-2002 02:20:15.000 all vectors.asc)					
1NF2	Delta-N	28664.8173	0.0308	0.0479	0.6
UAF18	Delta-E	-13381.0933	-0.0080	0.0330	0.2
	Delta-U	-58.6163	-0.0076	0.0662	0.1
	Length	31634.2986			
(V10 Postprocessed 22-MAY-2002 07:21:00.000 all vectors.asc)					
NR22	Delta-N	7364.3505	0.0105	0.0289	0.4
UAF15	Delta-E	6969.9476	-0.0291	0.0254	1.1
	Delta-U	-25.5449	0.0152	0.0377	0.4
	Length	10139.7476			
(V11 Postprocessed 22-MAY-2002 07:32:30.000 all vectors.asc)					
1NF2	Delta-N	27010.6959	-0.0149	0.0568	0.3
UAF15	Delta-E	-21182.3044	-0.0214	0.0403	0.5
	Delta-U	-369.5890	-0.0272	0.0902	0.3
	Length	34327.8940			

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(V12 Postprocessed 22-MAY-2002 07:50:15.000 all vectors.asc)
NR22               Delta-N          5778.3380        0.0066   0.0256   0.3
UAF16              Delta-E          9648.2430       -0.0157   0.0255   0.6
                   Delta-U            37.9036       -0.0132   0.0326   0.4
                   Length          11246.2981
(V13 Postprocessed 22-MAY-2002 07:50:15.000 all vectors.asc)
1NF2               Delta-N         25422.3211        0.0185   0.0357   0.5
UAF16              Delta-E        -18505.5348       -0.0209   0.0357   0.6
                   Delta-U          -301.0454       -0.0310   0.0623   0.5
                   Length          31445.8242
(V14 Postprocessed 22-MAY-2002 08:15:15.000 all vectors.asc)
NR22               Delta-N          4628.4739        0.0196   0.0254   0.8
UAF17              Delta-E         11960.5654       -0.0263   0.0258   1.0
                   Delta-U           100.2149        0.0104   0.0334   0.3
                   Length          12825.2852
(V15 Postprocessed 22-MAY-2002 08:15:15.000 all vectors.asc)
1NF2               Delta-N         24270.4245        0.0160   0.0288   0.6
UAF17              Delta-E        -16194.3411       -0.0132   0.0299   0.4
                   Delta-U          -234.5419       -0.0154   0.0463   0.3
                   Length          29178.1630
(V16 Postprocessed 22-MAY-2002 08:40:45.000 all vectors.asc)
NR22               Delta-N          4585.2725       -0.0220   0.0250   0.9
UAF21              Delta-E         14594.2521        0.0061   0.0251   0.2
                   Delta-U           132.5978        0.0125   0.0303   0.4
                   Length          15298.1862
(V17 Postprocessed 22-MAY-2002 08:40:45.000 all vectors.asc)
1NF2               Delta-N         24224.8706       -0.0119   0.0353   0.3
UAF21              Delta-E        -13560.7406        0.0018   0.0360   0.1
                   Delta-U          -198.5761       -0.0237   0.0607   0.4
                   Length          27762.8794
(V18 Postprocessed 22-MAY-2002 09:05:30.000 all vectors.asc)
NR22               Delta-N          3806.3028       -0.0189   0.0333   0.6
UAF22              Delta-E         17382.6882       -0.0110   0.0349   0.3
                   Delta-U           205.7899        0.0214   0.0629   0.3
                   Length          17795.7337
(V19 Postprocessed 22-MAY-2002 09:05:30.000 all vectors.asc)
1NF2               Delta-N         23443.4475       -0.0220   0.0322   0.7
UAF22              Delta-E        -10773.1123       -0.0260   0.0333   0.8
                   Delta-U          -120.9005        0.0055   0.0605   0.1
                   Length          25800.5774
(V20 Postprocessed 22-MAY-2002 09:30:30.000 all vectors.asc)
NR22               Delta-N          3974.3764       -0.0113   0.0299   0.4
UAF23              Delta-E         19808.0378       -0.0227   0.0310   0.7
                   Delta-U           247.3718        0.0022   0.0580   0.0
                   Length          20204.3367
(V21 Postprocessed 22-MAY-2002 09:30:30.000 all vectors.asc)
1NF2               Delta-N         23609.3656       -0.0098   0.0325   0.3
UAF23              Delta-E         -8347.6695       -0.0269   0.0341   0.8
                   Delta-U           -76.2148       -0.0136   0.0687   0.2
                   Length          25041.7958
(V22 Postprocessed 22-MAY-2002 10:09:45.000 all vectors.asc)
NR22               Delta-N          9214.2590        0.0229   0.0328   0.7
UAF20              Delta-E         25276.2863       -0.0097   0.0337   0.3
                   Delta-U           443.4749        0.0242   0.0732   0.3
                   Length          26907.0602
(V23 Postprocessed 22-MAY-2002 10:09:45.000 all vectors.asc)
1NF2               Delta-N         28844.4807        0.0196   0.0339   0.6
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UAF20	Delta-E	-2874.9440	-0.0141	0.0348	0.4
	Delta-U	122.3109	0.0089	0.0772	0.1
	Length	28987.6583			
(V24 Postprocessed 22-MAY-2002 10:46:30.000 all vectors.asc)					
NR22	Delta-N	5429.0315	-0.0250	0.0323	0.8
UAF24	Delta-E	22752.7571	0.0201	0.0308	0.7
	Delta-U	316.5669	-0.0049	0.0527	0.1
	Length	23393.6435			
(V25 Postprocessed 22-MAY-2002 10:46:30.000 all vectors.asc)					
1NF2	Delta-N	25061.4202	-0.0093	0.0360	0.3
UAF24	Delta-E	-5401.7290	0.0106	0.0340	0.3
	Delta-U	-4.4283	-0.0010	0.0620	0.0
	Length	25636.9554			
(V26 Postprocessed 22-MAY-2002 12:00:45.000 all vectors.asc)					
NR22	Delta-N	10720.0849	0.0129	0.0254	0.5
UAF11	Delta-E	8590.6310	0.0087	0.0246	0.4
	Delta-U	21.4830	-0.0157	0.0325	0.5
	Length	13737.5261			
(V27 Postprocessed 22-MAY-2002 12:00:45.000 all vectors.asc)					
1NF2	Delta-N	30365.0053	0.0036	0.0357	0.1
UAF11	Delta-E	-19558.6457	-0.0005	0.0315	0.0
	Delta-U	-323.5398	-0.0217	0.0657	0.3
	Length	36120.3384			
(V28 Postprocessed 22-MAY-2002 01:37:30.000 all vectors.asc)					
NR22	Delta-N	11115.4799	-0.0003	0.0247	0.0
UAF10	Delta-E	4331.6593	0.0197	0.0242	0.8
	Delta-U	16.6168	-0.0077	0.0288	0.3
	Length	11929.6874			
(V29 Postprocessed 22-MAY-2002 01:37:30.000 all vectors.asc)					
1NF2	Delta-N	30764.2490	-0.0014	0.0345	0.0
UAF10	Delta-E	-23817.2470	0.0068	0.0315	0.2
	Delta-U	-334.5065	0.0157	0.0567	0.3
	Length	38907.7391			
(V30 Postprocessed 22-MAY-2002 07:40:40.000 all vectors.asc)					
1NF2	Delta-N	18171.1717	0.0237	0.0367	0.6
UAF34	Delta-E	-31793.8923	0.0191	0.0338	0.6
	Delta-U	-410.5467	-0.0044	0.0589	0.1
	Length	36622.5561			
(V31 Postprocessed 22-MAY-2002 07:40:40.000 all vectors.asc)					
NR22	Delta-N	-1484.7426	-0.0027	0.0251	0.1
UAF34	Delta-E	-3633.6833	0.0162	0.0246	0.7
	Delta-U	-60.5699	0.0107	0.0296	0.4
	Length	3925.7844			
(V32 Postprocessed 14-MAY-2002 12:24:50.000 all vectors.asc)					
1PD5	Delta-N	-15763.4310	0.0771	0.0333	2.3
UAF26	Delta-E	-9144.8008	-0.0572	0.0312	1.8
	Delta-U	-295.2997	-0.0797	0.0612	1.3
	Length	18226.3639			
(V33 Postprocessed 14-MAY-2002 02:31:15.000 all vectors.asc)					
1PD5	Delta-N	-20295.9616	-0.0151	0.0347	0.4
UAF34	Delta-E	-9495.6150	-0.0447	0.0312	1.4
	Delta-U	-221.0531	-0.0351	0.0518	0.7
	Length	22408.5168			
(V34 Postprocessed 14-MAY-2002 01:18:50.000 all vectors.asc)					
1PD5	Delta-N	-15353.1447	-0.0651	0.0315	2.1
UAF27	Delta-E	-7011.7105	-0.0242	0.0292	0.8
	Delta-U	-227.9789	0.0479	0.0642	0.7

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                    Length          16880.0211
(V35 Postprocessed 14-MAY-2002 11:27:30.000 all vectors.asc)
1PD5                Delta-N        -17707.7705        -0.0458   0.0486   0.9
UAF30               Delta-E         -4296.8498        -0.0784   0.0408   1.9
                    Delta-U          -173.5857        -0.0096   0.0909   0.1
                    Length          18222.4638
(V36 Postprocessed 14-MAY-2002 10:48:55.000 all vectors.asc)
1PD5                Delta-N        -16445.5281        -0.0123   0.0329   0.4
UAF28               Delta-E          -225.0462         0.0522   0.0323   1.6
                    Delta-U          -114.0204        -0.0599   0.0647   0.9
                    Length          16447.4630
(V37 Postprocessed 14-MAY-2002 10:14:50.000 all vectors.asc)
1PD5                Delta-N        -18463.2740        -0.0773   0.0304   2.5
UAF35               Delta-E           778.5815        -0.0211   0.0319   0.7
                    Delta-U          -104.2235        -0.0241   0.0622   0.4
                    Length          18479.9767
(V38 Postprocessed 14-MAY-2002 09:40:25.000 all vectors.asc)
1PD5                Delta-N        -20643.0160        -0.0408   0.0308   1.3
UAF36               Delta-E          2842.9024        -0.0790   0.0339   2.3
                    Delta-U            -6.9313         0.0360   0.0552   0.7
                    Length          20837.8562
(V39 Postprocessed 14-MAY-2002 08:45:30.000 all vectors.asc)
1PD5                Delta-N        -22028.9779         0.0812   0.0388   2.1
UAF37               Delta-E          4939.2151        -0.0682   0.0424   1.6
                    Delta-U            56.3031        -0.0769   0.0854   0.9
                    Length          22575.9802
(V40 Postprocessed 16-MAY-2002 03:06:30.000 all vectors.asc)
1PD5                Delta-N         -9826.1527         0.0434   0.0276   1.6
UAF14               Delta-E         -1699.0662         0.0289   0.0254   1.1
                    Delta-U          -207.3111         0.0413   0.0430   1.0
                    Length           9974.1205
(V41 Postprocessed 16-MAY-2002 07:58:45.000 all vectors.asc)
1PD5                Delta-N        -14185.8380         0.0246   0.0265   0.9
UAF17               Delta-E          6099.7408        -0.0257   0.0249   1.0
                    Delta-U           -50.3925        -0.0116   0.0321   0.4
                    Length          15441.7414
(V42 Postprocessed 16-MAY-2002 10:19:45.000 all vectors.asc)
1PD5                Delta-N         -9789.7569        -0.0181   0.0270   0.7
UAF18               Delta-E          8910.0252         0.0086   0.0274   0.3
                    Delta-U           130.6452        -0.0008   0.0469   0.0
                    Length          13238.0118
(V43 Postprocessed 16-MAY-2002 08:52:45.000 all vectors.asc)
1PD5                Delta-N        -10593.7447        -0.0299   0.0252   1.2
UAF19               Delta-E         12017.8685         0.0147   0.0255   0.6
                    Delta-U           288.1583         0.0005   0.0316   0.0
                    Length          16023.0966
(V44 Postprocessed 16-MAY-2002 12:45:00.000 all vectors.asc)
1PD5                Delta-N        -13387.5142         0.0327   0.0335   1.0
UAF24               Delta-E         16892.0224        -0.0249   0.0304   0.8
                    Delta-U           169.6995         0.0240   0.0658   0.4
                    Length          21554.4602
(V45 Postprocessed 16-MAY-2002 01:43:00.000 all vectors.asc)
1PD5                Delta-N         -9602.8794        -0.0533   0.0382   1.4
UAF20               Delta-E         19416.2298         0.0275   0.0365   0.8
                    Delta-U           300.7280         0.0143   0.0925   0.2
                    Length          21663.2341
(V46 Postprocessed 17-MAY-2002 01:14:15.000 all vectors.asc)
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1PD5	Delta-N	-7141.2232	-0.0005	0.0254	0.0
UAF9	Delta-E	-4306.8145	0.0070	0.0251	0.3
	Delta-U	-229.9108	0.0249	0.0421	0.6
	Length	8342.5762			
(V47 Postprocessed	17-MAY-2002 12:25:15.000 all vectors.asc)				
1PD5	Delta-N	-9330.4822	-0.0679	0.0255	2.7
UAF13	Delta-E	-3811.2038	0.0230	0.0247	0.9
	Delta-U	-228.5789	0.0356	0.0306	1.2
	Length	10081.4394			
(V48 Postprocessed	17-MAY-2002 08:34:00.000 all vectors.asc)				
1PD5	Delta-N	-8093.5220	-0.0156	0.0250	0.6
UAF11	Delta-E	2730.9776	-0.0087	0.0254	0.3
	Delta-U	-124.5710	0.0217	0.0317	0.7
	Length	8542.7663			
(V49 Postprocessed	17-MAY-2002 09:58:30.000 all vectors.asc)				
1PD5	Delta-N	-6704.4655	-0.0068	0.0252	0.3
UAF12	Delta-E	5102.5014	-0.0076	0.0255	0.3
	Delta-U	-55.6912	0.0034	0.0365	0.1
	Length	8425.4661			
(V50 Postprocessed	17-MAY-2002 10:52:00.000 all vectors.asc)				
1PD5	Delta-N	-4551.6618	-0.0010	0.0260	0.0
UAF8	Delta-E	6378.5124	0.0149	0.0260	0.6
	Delta-U	11.4820	0.0166	0.0361	0.5
	Length	7836.0180			
(V51 Postprocessed	17-MAY-2002 08:46:05.000 all vectors.asc)				
1PD5	Delta-N	-17283.1409	0.0221	0.0368	0.6
UAF25	Delta-E	-13932.1607	-0.0562	0.0389	1.4
	Delta-U	-352.9588	-0.0279	0.0684	0.4
	Length	22202.1765			
(V52 Postprocessed	17-MAY-2002 08:19:10.000 all vectors.asc)				
1PD5	Delta-N	-17701.2048	-0.0015	0.0347	0.0
UAF29	Delta-E	-12202.5789	0.0101	0.0360	0.3
	Delta-U	-300.6753	-0.0290	0.0625	0.5
	Length	21501.7671			
(V53 Postprocessed	17-MAY-2002 09:20:45.000 all vectors.asc)				
1PD5	Delta-N	-21278.6256	0.0371	0.0311	1.2
UAF33	Delta-E	-11194.2466	-0.0454	0.0317	1.4
	Delta-U	-254.6345	-0.0255	0.0570	0.4
	Length	24044.8727			
(V54 Postprocessed	17-MAY-2002 09:59:35.000 all vectors.asc)				
1PD5	Delta-N	-21376.6490	0.0461	0.0309	1.5
UAF32	Delta-E	-13992.1757	0.0033	0.0321	0.1
	Delta-U	-366.4723	-0.0439	0.0652	0.7
	Length	25551.4462			
(V55 Postprocessed	17-MAY-2002 10:39:20.000 all vectors.asc)				
1PD5	Delta-N	-23728.1107	0.0421	0.0293	1.4
UAF31	Delta-E	-15688.8150	0.0741	0.0299	2.5
	Delta-U	-337.0312	-0.0264	0.0553	0.5
	Length	28447.7722			
(V56 Postprocessed	17-MAY-2002 11:33:15.000 all vectors.asc)				
1PD5	Delta-N	-11448.9065	0.0001	0.0281	0.0
UAF15	Delta-E	1109.6745	0.0418	0.0265	1.6
	Delta-U	-175.0796	-0.0100	0.0396	0.3
	Length	11503.8902			
(V57 Postprocessed	17-MAY-2002 12:12:50.000 all vectors.asc)				
1PD5	Delta-N	-13035.4814	-0.0127	0.0260	0.5
UAF16	Delta-E	3787.6529	0.0247	0.0252	1.0

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                    Delta-U          -112.3129          0.0209   0.0321   0.7
                    Length          13575.0766
(V58 Postprocessed 17-MAY-2002 12:37:50.000 all vectors.asc)
1PD5                Delta-N        -14185.8380         -0.0650   0.0297   2.2
UAF17               Delta-E          6099.7408          0.0622   0.0276   2.3
                    Delta-U           -50.3925          0.0117   0.0461   0.3
                    Length          15441.7414
(V59 Postprocessed 17-MAY-2002 01:02:25.000 all vectors.asc)
1PD5                Delta-N        -14229.5660          0.0491   0.0323   1.5
UAF21               Delta-E          8733.4101         -0.0032   0.0313   0.1
                    Delta-U           -17.3122         -0.0476   0.0785   0.6
                    Length          16695.9067
(V60 Postprocessed 17-MAY-2002 01:34:40.000 all vectors.asc)
1PD5                Delta-N        -15009.1281          0.0325   0.0308   1.1
UAF22               Delta-E         11521.6787          0.0217   0.0300   0.7
                    Delta-U            55.9568         -0.0407   0.0728   0.6
                    Length          18921.5786
(V61 Postprocessed 17-MAY-2002 01:56:05.000 all vectors.asc)
1PD5                Delta-N        -14841.5501          0.0176   0.0325   0.5
UAF23               Delta-E         13947.0482          0.0424   0.0305   1.4
                    Delta-U            98.3686          0.0090   0.0576   0.2
                    Length          20366.6747
(V62 Postprocessed 20-MAY-2002 02:02:45.000 all vectors.asc)
1PD5                Delta-N         -7697.3185          0.0022   0.0328   0.1
UAF10               Delta-E         -1527.9180         -0.0326   0.0288   1.1
                    Delta-U          -130.2714          0.0073   0.0453   0.2
                    Length           7848.5805
(V63 Postprocessed 20-MAY-2002 09:44:15.000 all vectors.asc)
1PD5                Delta-N         -1866.1367          0.0261   0.0255   1.0
UAF4                Delta-E          8911.6675         -0.0423   0.0259   1.6
                    Delta-U           122.7728          0.0378   0.0389   1.0
                    Length           9105.7870
(V64 Postprocessed 20-MAY-2002 09:11:00.000 all vectors.asc)
1PD5                Delta-N         -1843.7230          0.0290   0.0277   1.0
UAF5                Delta-E         11776.1577         -0.0342   0.0286   1.2
                    Delta-U           174.0891          0.0359   0.0440   0.8
                    Length          11920.8856
(V65 Postprocessed 20-MAY-2002 10:44:30.000 all vectors.asc)
1PD5                Delta-N           408.8732          0.0151   0.0320   0.5
UAF2                Delta-E         13869.9044         -0.0191   0.0312   0.6
                    Delta-U           203.0863         -0.0349   0.0535   0.7
                    Length          13877.4158
(V66 Postprocessed 20-MAY-2002 11:50:15.000 all vectors.asc)
1PD5                Delta-N          1094.4818          0.0134   0.0333   0.4
UAF3                Delta-E         16534.4380         -0.0526   0.0302   1.7
                    Delta-U           296.7672          0.0026   0.0553   0.0
                    Length          16573.2797
(V67 Postprocessed 21-MAY-2002 08:25:45.000 all vectors.asc)
1PD5                Delta-N         -4613.3981         -0.0433   0.0266   1.6
UAF6                Delta-E         -4726.4190         -0.0654   0.0271   2.4
                    Delta-U          -242.4275         -0.0104   0.0369   0.3
                    Length           6609.1792
(V68 Postprocessed 21-MAY-2002 08:25:45.000 all vectors.asc)
1NF2                Delta-N         33850.2481         -0.0424   0.0331   1.3
UAF6                Delta-E        -27013.4105         -0.0422   0.0347   1.2
                    Delta-U          -455.7543          0.0422   0.0585   0.7
                    Length          43310.1761
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(V69 Postprocessed 21-MAY-2002 11:00:25.000 all vectors.asc)
1PD5               Delta-N            16.2277        0.0130   0.0288   0.5
UAF1               Delta-E          3855.0849       -0.0097   0.0275   0.4
                   Delta-U            21.8437        0.0007   0.0427   0.0
                   Length           3855.1810
(V70 Postprocessed 21-MAY-2002 11:00:25.000 all vectors.asc)
1NF2               Delta-N         38474.2038        0.0053   0.0379   0.1
UAF1               Delta-E        -18428.8687       -0.0220   0.0352   0.6
                   Delta-U          -190.8795        0.0347   0.0675   0.5
                   Length          42660.5672
(V71 Postprocessed 21-MAY-2002 12:16:00.000 all vectors.asc)
1PD5               Delta-N         -4750.0374       -0.0577   0.0285   2.0
UAF7               Delta-E         -1132.1278       -0.0621   0.0265   2.3
                   Delta-U          -104.9248        0.0130   0.0448   0.3
                   Length           4884.2172
(V72 Postprocessed 21-MAY-2002 12:16:00.000 all vectors.asc)
1NF2               Delta-N         33711.2874       -0.0600   0.0309   1.9
UAF7               Delta-E        -23419.3667       -0.0351   0.0280   1.3
                   Delta-U          -314.1721        0.0152   0.0570   0.3
                   Length          41048.9505
(V73 Postprocessed 21-MAY-2002 12:54:30.000 all vectors.asc)
1PD5               Delta-N        -22028.9779       -0.0334   0.0378   0.9
UAF37              Delta-E          4939.2151        0.0376   0.0338   1.1
                   Delta-U            56.3031        0.0160   0.0925   0.2
                   Length          22575.9802
(V74 Postprocessed 21-MAY-2002 12:54:30.000 all vectors.asc)
1NF2               Delta-N         16428.3281       -0.0368   0.0360   1.0
UAF37              Delta-E        -17360.6141        0.0035   0.0326   0.1
                   Delta-U          -114.6228        0.0035   0.0901   0.0
                   Length          23901.7578
(V75 Postprocessed 21-MAY-2002 01:16:40.000 all vectors.asc)
1PD5               Delta-N        -20643.0160        0.0102   0.0342   0.3
UAF36              Delta-E          2842.9024        0.0495   0.0317   1.6
                   Delta-U            -6.9313       -0.0067   0.0714   0.1
                   Length          20837.8562
(V76 Postprocessed 21-MAY-2002 01:16:40.000 all vectors.asc)
1NF2               Delta-N         17815.6727        0.0176   0.0345   0.5
UAF36              Delta-E        -19455.8621        0.0101   0.0319   0.3
                   Delta-U          -182.6448        0.0002   0.0736   0.0
                   Length          26381.0940
(V77 Postprocessed 21-MAY-2002 01:39:15.000 all vectors.asc)
1PD5               Delta-N        -18463.2740        0.0487   0.0371   1.3
UAF35              Delta-E            778.5815        0.0198   0.0337   0.6
                   Delta-U          -104.2235       -0.0215   0.0645   0.3
                   Length          18479.9767
(V78 Postprocessed 21-MAY-2002 01:39:15.000 all vectors.asc)
1NF2               Delta-N         19996.7100        0.0496   0.0329   1.5
UAF35              Delta-E        -21518.5119       -0.0003   0.0304   0.0
                   Delta-U          -286.1539        0.0192   0.0540   0.4
                   Length          29376.8046
(V79 Postprocessed 21-MAY-2002 02:00:30.000 all vectors.asc)
1PD5               Delta-N        -16445.5281        0.0043   0.0369   0.1
UAF28              Delta-E          -225.0462       -0.0452   0.0312   1.4
                   Delta-U          -114.0204        0.0285   0.0528   0.5
                   Length          16447.4630
(V81 Postprocessed 21-MAY-2002 02:26:20.000 all vectors.asc)
1PD5               Delta-N        -15353.1447        0.0437   0.0359   1.2
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UAF27	Delta-E	-7011.7105	0.0018	0.0293	0.1
	Delta-U	-227.9789	-0.0375	0.0546	0.7
	Length	16880.0211			
(V82 Postprocessed	21-MAY-2002 02:26:20.000 all vectors.asc)				
1NF2	Delta-N	23112.1865	0.0391	0.0346	1.1
UAF27	Delta-E	-29306.4314	0.0171	0.0286	0.6
	Delta-U	-423.9397	-0.0082	0.0526	0.2
	Length	37325.8598			
(V83 Postprocessed	21-MAY-2002 03:00:55.000 all vectors.asc)				
1PD5	Delta-N	-15763.4310	-0.0404	0.0322	1.3
UAF26	Delta-E	-9144.8008	0.0339	0.0281	1.2
	Delta-U	-295.2997	-0.0008	0.0581	0.0
	Length	18226.3639			
(V84 Postprocessed	21-MAY-2002 03:00:55.000 all vectors.asc)				
1NF2	Delta-N	22703.3052	-0.0342	0.0349	1.0
UAF26	Delta-E	-31439.7430	0.0175	0.0297	0.6
	Delta-U	-492.7757	0.0597	0.0670	0.9
	Length	38783.2481			
(V85 Postprocessed	21-MAY-2002 03:35:45.000 all vectors.asc)				
1PD5	Delta-N	-17707.7705	0.0278	0.0331	0.8
UAF30	Delta-E	-4296.8498	0.0212	0.0285	0.7
	Delta-U	-173.5857	0.0124	0.0633	0.2
	Length	18222.4638			
(V86 Postprocessed	21-MAY-2002 03:35:45.000 all vectors.asc)				
1NF2	Delta-N	20755.7205	0.0006	0.0345	0.0
UAF30	Delta-E	-26593.3224	0.0213	0.0294	0.7
	Delta-U	-362.3142	0.0534	0.0685	0.8
	Length	33736.2713			
(V87 Postprocessed	21-MAY-2002 08:01:45.000 all vectors.asc)				
1PD5	Delta-N	-6704.4655	0.0026	0.0272	0.1
UAF12	Delta-E	5102.5014	0.0106	0.0273	0.4
	Delta-U	-55.6912	-0.0085	0.0386	0.2
	Length	8425.4661			
(V88 Postprocessed	21-MAY-2002 08:01:45.000 all vectors.asc)				
1NF2	Delta-N	31752.4870	0.0110	0.0397	0.3
UAF12	Delta-E	-17186.1992	-0.0055	0.0404	0.1
	Delta-U	-254.6954	0.0119	0.0740	0.2
	Length	36106.1040			
(V89 Postprocessed	21-MAY-2002 08:40:30.000 all vectors.asc)				
1PD5	Delta-N	-4551.6618	-0.0005	0.0270	0.0
UAF8	Delta-E	6378.5124	0.0013	0.0274	0.0
	Delta-U	11.4820	-0.0313	0.0379	0.8
	Length	7836.0180			
(V90 Postprocessed	21-MAY-2002 08:40:30.000 all vectors.asc)				
1NF2	Delta-N	33904.4961	0.0002	0.0347	0.0
UAF8	Delta-E	-15908.7140	-0.0318	0.0359	0.9
	Delta-U	-190.1323	0.0303	0.0604	0.5
	Length	37451.8116			
(V91 Postprocessed	21-MAY-2002 09:31:15.000 all vectors.asc)				
1PD5	Delta-N	408.8732	0.0112	0.0261	0.4
UAF2	Delta-E	13869.9044	0.0269	0.0267	1.0
	Delta-U	203.0863	0.0032	0.0412	0.1
	Length	13877.4158			
(V92 Postprocessed	21-MAY-2002 09:31:15.000 all vectors.asc)				
1NF2	Delta-N	38860.0074	-0.0219	0.0290	0.8
UAF2	Delta-E	-8413.9682	-0.0178	0.0302	0.6
	Delta-U	0.3047	0.0291	0.0549	0.5

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                    Length            39760.4708
(V93 Postprocessed 21-MAY-2002 10:17:15.000 all vectors.asc)
1PD5                Delta-N            1094.4818        -0.0003   0.0333   0.0
UAF3                Delta-E           16534.4380         0.0426   0.0343   1.2
                    Delta-U             296.7672        -0.0179   0.0745   0.2
                    Length            16573.2797
(V94 Postprocessed 22-MAY-2002 08:19:25.000 all vectors.asc)
1NF2                Delta-N           17189.6647        -0.0141   0.0318   0.4
UAF33               Delta-E          -33493.1928         0.0264   0.0331   0.8
                    Delta-U            -444.1254         0.0316   0.0541   0.6
                    Length            37649.3796
(V95 Postprocessed 22-MAY-2002 08:19:25.000 all vectors.asc)
NR22                Delta-N           -2467.7569        -0.0209   0.0248   0.8
UAF33               Delta-E           -5332.1385         0.0176   0.0251   0.7
                    Delta-U             -92.7895         0.0027   0.0304   0.1
                    Length             5876.2348
(V96 Postprocessed 22-MAY-2002 08:47:15.000 all vectors.asc)
NR22                Delta-N           -2566.4089        -0.0304   0.0259   1.2
UAF32               Delta-E           -8130.0802        -0.0083   0.0261   0.3
                    Delta-U            -203.7560         0.0119   0.0334   0.4
                    Length             8527.9643
(V97 Postprocessed 22-MAY-2002 08:47:15.000 all vectors.asc)
1NF2                Delta-N           17093.4399        -0.0095   0.0401   0.2
UAF32               Delta-E          -36291.0710         0.0128   0.0410   0.3
                    Delta-U            -558.7620         0.0171   0.0724   0.2
                    Length            40119.0694
(V98 Postprocessed 22-MAY-2002 09:21:35.000 all vectors.asc)
1NF2                Delta-N           14743.2527        -0.0221   0.0326   0.7
UAF31               Delta-E          -37989.4296        -0.0315   0.0343   0.9
                    Delta-U            -526.7927        -0.0373   0.0703   0.5
                    Length            40753.3775
(V99 Postprocessed 22-MAY-2002 09:21:35.000 all vectors.asc)
NR22                Delta-N           -4918.1630        -0.0268   0.0253   1.1
UAF31               Delta-E           -9826.2671        -0.0423   0.0259   1.6
                    Delta-U            -171.7188         0.0213   0.0377   0.6
                    Length            10989.6925
(V100 Postprocessed 22-MAY-2002 10:01:10.000 all vectors.asc)
NR22                Delta-N            1109.4307         0.0010   0.0260   0.0
UAF29               Delta-E           -6341.1593        -0.0123   0.0262   0.5
                    Delta-U            -141.7754         0.0248   0.0418   0.6
                    Length             6439.0401
(V101 Postprocessed 22-MAY-2002 10:01:10.000 all vectors.asc)
1NF2                Delta-N           20767.7160         0.0018   0.0319   0.1
UAF29               Delta-E          -34498.9051         0.0109   0.0327   0.3
                    Delta-U            -497.8353        -0.0298   0.0706   0.4
                    Length            40270.5888
(V102 Postprocessed 22-MAY-2002 10:31:10.000 all vectors.asc)
NR22                Delta-N            1527.1210        -0.0163   0.0265   0.6
UAF25               Delta-E           -8070.8346         0.0076   0.0263   0.3
                    Delta-U            -193.9521         0.0053   0.0369   0.1
                    Length             8216.3305
(V103 Postprocessed 22-MAY-2002 10:31:10.000 all vectors.asc)
1NF2                Delta-N           21186.9218         0.0040   0.0326   0.1
UAF25               Delta-E          -36228.1295         0.0273   0.0321   0.9
                    Delta-U            -552.7315        -0.0034   0.0567   0.1
                    Length            41972.2353
(V104 Postprocessed 22-MAY-2002 11:12:10.000 all vectors.asc)
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1NF2	Delta-N	28635.3995	-0.0165	0.0415	0.4
UAF14	Delta-E	-23989.8427	-0.0266	0.0361	0.7
	Delta-U	-407.8035	-0.0511	0.0743	0.7
	Length	37358.5995			
(V105 Postprocessed 22-MAY-2002 11:12:10.000 all vectors.asc)					
NR22	Delta-N	8986.5448	-0.0292	0.0278	1.1
UAF14	Delta-E	4160.8915	-0.0168	0.0262	0.6
	Delta-U	-58.4545	-0.0073	0.0391	0.2
	Length	9903.2532			
(V106 Postprocessed 22-MAY-2002 11:33:40.000 all vectors.asc)					
1NF2	Delta-N	29132.5430	0.0509	0.0322	1.6
UAF13	Delta-E	-26101.5998	-0.0051	0.0293	0.2
	Delta-U	-432.2345	-0.0657	0.0521	1.3
	Length	39117.5843			
(V107 Postprocessed 22-MAY-2002 11:33:40.000 all vectors.asc)					
NR22	Delta-N	9481.7975	0.0488	0.0268	1.8
UAF13	Delta-E	2048.6545	-0.0219	0.0256	0.9
	Delta-U	-79.5784	-0.0365	0.0366	1.0
	Length	9700.9176			
(V108 Postprocessed 22-MAY-2002 11:57:50.000 all vectors.asc)					
1NF2	Delta-N	31322.1504	-0.0019	0.0356	0.1
UAF9	Delta-E	-26595.6357	-0.0073	0.0319	0.2
	Delta-U	-438.1304	-0.0279	0.0646	0.4
	Length	41092.5407			
(V109 Postprocessed 22-MAY-2002 11:57:50.000 all vectors.asc)					
NR22	Delta-N	11670.9609	0.0010	0.0271	0.0
UAF9	Delta-E	1552.6300	-0.0056	0.0258	0.2
	Delta-U	-82.7467	-0.0131	0.0386	0.3
	Length	11774.0747			
(V110 Postprocessed 22-MAY-2002 12:39:30.000 all vectors.asc)					
1NF2	Delta-N	33850.2481	0.0445	0.0331	1.3
UAF6	Delta-E	-27013.4105	0.0543	0.0302	1.8
	Delta-U	-455.7543	-0.0170	0.0738	0.2
	Length	43310.1761			
(V111 Postprocessed 22-MAY-2002 12:39:30.000 all vectors.asc)					
NR22	Delta-N	14198.6945	0.0368	0.0252	1.5
UAF6	Delta-E	1132.5446	0.0385	0.0246	1.6
	Delta-U	-97.4264	-0.0007	0.0368	0.0
	Length	14244.1242			
(V112 Postprocessed 22-MAY-2002 02:03:45.000 all vectors.asc)					
1NF2	Delta-N	38474.2038	-0.0205	0.0422	0.5
UAF1	Delta-E	-18428.8687	0.0149	0.0328	0.5
	Delta-U	-190.8795	-0.0030	0.0572	0.1
	Length	42660.5672			
(V113 Postprocessed 22-MAY-2002 02:03:45.000 all vectors.asc)					
NR22	Delta-N	18830.1754	-0.0246	0.0378	0.7
UAF1	Delta-E	9713.2476	0.0156	0.0300	0.5
	Delta-U	160.2670	-0.0210	0.0492	0.4
	Length	21188.4018			
(V114 Postprocessed 22-MAY-2002 02:50:40.000 all vectors.asc)					
1NF2	Delta-N	33711.2874	0.0502	0.0335	1.5
UAF7	Delta-E	-23419.3667	0.0390	0.0288	1.4
	Delta-U	-314.1721	0.0006	0.0609	0.0
	Length	41048.9505			
(V115 Postprocessed 22-MAY-2002 02:50:40.000 all vectors.asc)					
NR22	Delta-N	14062.8572	0.0534	0.0256	2.1
UAF7	Delta-E	4726.8999	0.0456	0.0244	1.9

Delta-U	39.1938	-0.0085	0.0344	0.2
Length	14836.0733			

GPS Vector Residual Summary (FeetInt)
(Sorted by 3D Residual Length)

From	To	N	E	Up	2D	3D	Length	VectID
1PD5	UAF37	0.081	-0.068	-0.077	0.106	0.131	22576	39
1PD5	UAF26	0.077	-0.057	-0.080	0.096	0.125	18226	32
1PD5	UAF36	-0.041	-0.079	0.036	0.089	0.096	20838	38
1PD5	UAF30	-0.046	-0.078	-0.010	0.091	0.091	18222	35
1PD5	UAF17	-0.065	0.062	0.012	0.090	0.091	15442	58
1PD5	UAF31	0.042	0.074	-0.026	0.085	0.089	28448	55
1PD5	UAF7	-0.058	-0.062	0.013	0.085	0.086	4884	71
1PD5	UAF27	-0.065	-0.024	0.048	0.069	0.084	16880	34
1PD5	UAF35	-0.077	-0.021	-0.024	0.080	0.084	18480	37
1NF2	UAF13	0.051	-0.005	-0.066	0.051	0.083	39118	106
1PD5	UAF28	-0.012	0.052	-0.060	0.054	0.080	16447	36
1PD5	UAF13	-0.068	0.023	0.036	0.072	0.080	10081	47
1PD5	UAF6	-0.043	-0.065	-0.010	0.078	0.079	6609	67
1NF2	UAF6	-0.042	-0.042	0.042	0.060	0.073	43310	68
1NF2	UAF6	0.045	0.054	-0.017	0.070	0.072	43310	110
1NF2	UAF7	-0.060	-0.035	0.015	0.069	0.071	41049	72
1NF2	UAF26	-0.034	0.018	0.060	0.038	0.071	38783	84
NR22	UAF7	0.053	0.046	-0.009	0.070	0.071	14836	115
1PD5	UAF21	0.049	-0.003	-0.048	0.049	0.068	16696	59
1PD5	UAF14	0.043	0.029	0.041	0.052	0.067	9974	40
1PD5	UAF25	0.022	-0.056	-0.028	0.060	0.066	22202	51
NR22	UAF13	0.049	-0.022	-0.036	0.053	0.065	9701	107
1PD5	UAF33	0.037	-0.045	-0.025	0.059	0.064	24045	53
1PD5	UAF32	0.046	0.003	-0.044	0.046	0.064	25551	54
1NF2	UAF7	0.050	0.039	0.001	0.064	0.064	41049	114
1PD5	UAF4	0.026	-0.042	0.038	0.050	0.062	9106	63
1PD5	UAF20	-0.053	0.028	0.014	0.060	0.062	21663	45
1NF2	UAF14	-0.016	-0.027	-0.051	0.031	0.060	37359	104
1NF2	UAF19	0.044	-0.039	-0.007	0.059	0.059	29693	7
1PD5	UAF34	-0.015	-0.045	-0.035	0.047	0.059	22409	33
1PD5	UAF27	0.044	0.002	-0.037	0.044	0.058	16880	81
1NF2	UAF30	0.001	0.021	0.053	0.021	0.058	33736	86
1PD5	UAF5	0.029	-0.034	0.036	0.045	0.057	11921	64
1PD5	UAF35	0.049	0.020	-0.021	0.053	0.057	18480	77
1PD5	UAF22	0.032	0.022	-0.041	0.039	0.056	18922	60
NR22	UAF31	-0.027	-0.042	0.021	0.050	0.054	10990	99
1PD5	UAF3	0.013	-0.053	0.003	0.054	0.054	16573	66
1PD5	UAF28	0.004	-0.045	0.029	0.045	0.054	16447	79
1NF2	UAF31	-0.022	-0.031	-0.037	0.038	0.054	40753	98
NR22	UAF6	0.037	0.038	-0.001	0.053	0.053	14244	111
1NF2	UAF35	0.050	-0.000	0.019	0.050	0.053	29377	78
1PD5	UAF37	-0.033	0.038	0.016	0.050	0.053	22576	73
1PD5	UAF26	-0.040	0.034	-0.001	0.053	0.053	18226	83
1PD5	UAF36	0.010	0.049	-0.007	0.051	0.051	20838	75
1PD5	UAF24	0.033	-0.025	0.024	0.041	0.048	21554	44
1PD5	UAF4	-0.010	0.039	-0.024	0.041	0.047	9106	2
1PD5	UAF23	0.018	0.042	0.009	0.046	0.047	20367	61
1PD5	UAF3	-0.000	0.043	-0.018	0.043	0.046	16573	93
1NF2	UAF8	0.000	-0.032	0.030	0.032	0.044	37452	90
1NF2	UAF33	-0.014	0.026	0.032	0.030	0.044	37649	94

1NF2	UAF27	0.039	0.017	-0.008	0.043	0.043	37326	82
1PD5	UAF15	0.000	0.042	-0.010	0.042	0.043	11504	56
1PD5	UAF2	0.015	-0.019	-0.035	0.024	0.043	13877	65
1NF2	UAF16	0.019	-0.021	-0.031	0.028	0.042	31446	13
1NF2	UAF1	0.005	-0.022	0.035	0.023	0.041	42661	70
1NF2	UAF2	-0.022	-0.018	0.029	0.028	0.041	39760	92
1NF2	UAF15	-0.015	-0.021	-0.027	0.026	0.038	34328	11
1PD5	UAF17	0.025	-0.026	-0.012	0.036	0.037	15442	41
1NF2	UAF37	-0.037	0.004	0.004	0.037	0.037	23902	74
1PD5	UAF30	0.028	0.021	0.012	0.035	0.037	18222	85
1NF2	UAF3	-0.023	0.025	-0.012	0.034	0.036	39960	1
NR22	UAF1	-0.025	0.016	-0.021	0.029	0.036	21188	113
1PD5	UAF16	-0.013	0.025	0.021	0.028	0.035	13575	57
NR22	UAF20	0.023	-0.010	0.024	0.025	0.035	26907	22
1NF2	UAF22	-0.022	-0.026	0.006	0.034	0.034	25801	19
NR22	UAF15	0.011	-0.029	0.015	0.031	0.034	10140	10
NR22	UAF14	-0.029	-0.017	-0.007	0.034	0.034	9903	105
NR22	UAF17	0.020	-0.026	0.010	0.033	0.034	12825	14
NR22	UAF32	-0.030	-0.008	0.012	0.032	0.034	8528	96
1NF2	UAF5	-0.033	0.004	-0.004	0.033	0.034	38087	5
1PD5	UAF10	0.002	-0.033	0.007	0.033	0.033	7849	62
1PD5	UAF19	-0.030	0.015	0.001	0.033	0.033	16023	43
1NF2	UAF18	0.031	-0.008	-0.008	0.032	0.033	31634	9
NR22	UAF24	-0.025	0.020	-0.005	0.032	0.032	23394	24
1NF2	UAF29	0.002	0.011	-0.030	0.011	0.032	40271	101
1NF2	UAF23	-0.010	-0.027	-0.014	0.029	0.032	25042	21
1PD5	UAF8	-0.000	0.001	-0.031	0.001	0.031	7836	89
1NF2	UAF34	0.024	0.019	-0.004	0.030	0.031	36623	30
1PD5	UAF29	-0.001	0.010	-0.029	0.010	0.031	21502	52
NR22	UAF22	-0.019	-0.011	0.021	0.022	0.031	17796	18
1PD5	UAF5	-0.002	0.024	-0.016	0.024	0.029	11921	4
1PD5	UAF2	0.011	0.027	0.003	0.029	0.029	13877	91
1NF2	UAF9	-0.002	-0.007	-0.028	0.008	0.029	41093	108
1PD5	UAF11	-0.016	-0.009	0.022	0.018	0.028	8543	48
1NF2	UAF25	0.004	0.027	-0.003	0.028	0.028	41972	103
NR22	UAF29	0.001	-0.012	0.025	0.012	0.028	6439	100
NR22	UAF33	-0.021	0.018	0.003	0.027	0.027	5876	95
1NF2	UAF21	-0.012	0.002	-0.024	0.012	0.027	27763	17
NR22	UAF21	-0.022	0.006	0.013	0.023	0.026	15298	16
1PD5	UAF9	-0.000	0.007	0.025	0.007	0.026	8343	46
1NF2	UAF17	0.016	-0.013	-0.015	0.021	0.026	29178	15
1NF2	UAF20	0.020	-0.014	0.009	0.024	0.026	28988	23
1NF2	UAF1	-0.020	0.015	-0.003	0.025	0.025	42661	112
NR22	UAF23	-0.011	-0.023	0.002	0.025	0.025	20204	20
1NF2	UAF32	-0.010	0.013	0.017	0.016	0.023	40119	97
1NF2	UAF4	-0.022	0.004	0.000	0.023	0.023	38956	3
1PD5	UAF8	-0.001	0.015	0.017	0.015	0.022	7836	50
NR22	UAF11	0.013	0.009	-0.016	0.016	0.022	13738	26
1NF2	UAF11	0.004	-0.000	-0.022	0.004	0.022	36120	27
NR22	UAF16	0.007	-0.016	-0.013	0.017	0.022	11246	12
NR22	UAF10	-0.000	0.020	-0.008	0.020	0.021	11930	28
1NF2	UAF36	0.018	0.010	0.000	0.020	0.020	26381	76
1PD5	UAF18	-0.018	0.009	-0.001	0.020	0.020	13238	42
NR22	UAF34	-0.003	0.016	0.011	0.016	0.020	3926	31
NR22	UAF25	-0.016	0.008	0.005	0.018	0.019	8216	102
1NF2	UAF10	-0.001	0.007	0.016	0.007	0.017	38908	29
1NF2	UAF12	0.011	-0.005	0.012	0.012	0.017	36106	88

1PD5	UAF1	0.013	-0.010	0.001	0.016	0.016	3855	69
1PD5	UAF18	0.014	-0.004	-0.003	0.014	0.015	13238	8
NR22	UAF9	0.001	-0.006	-0.013	0.006	0.014	11774	109
1NF2	UAF24	-0.009	0.011	-0.001	0.014	0.014	25637	25
1PD5	UAF12	0.003	0.011	-0.008	0.011	0.014	8425	87
1PD5	UAF19	0.010	0.009	0.001	0.014	0.014	16023	6
1PD5	UAF12	-0.007	-0.008	0.003	0.010	0.011	8425	49

Adjusted Bearings (DMS) and Horizontal Distances (FeetInt)
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(Relative Confidence of Bearing is in Seconds)

From	To	Grid Bearing	Grid Dist Grnd Dist	95% RelConfidence Brg	Dist	PPM
1NF2	UAF1	N25-30-23.77W	42651.8967 42660.3131	0.19	0.0439	1.0284
1NF2	UAF10	N37-39-32.65W	38899.0777 38906.5959	0.22	0.0439	1.1296
1NF2	UAF11	N32-41-55.88W	36112.1581 36119.1557	0.23	0.0401	1.1103
1NF2	UAF12	N28-20-14.06W	36098.3510 36105.4124	0.25	0.0437	1.2115
1NF2	UAF13	N41-46-17.83W	39108.1241 39115.5837	0.21	0.0393	1.0046
1NF2	UAF14	N39-52-03.97W	37349.5734 37356.7234	0.24	0.0439	1.1754
1NF2	UAF15	N38-01-00.39W	34319.5914 34326.1965	0.26	0.0469	1.3654
1NF2	UAF16	N35-57-51.69W	31438.4952 31444.6009	0.27	0.0415	1.3203
1NF2	UAF17	N33-37-32.17W	29171.6621 29177.3771	0.25	0.0354	1.2127
1NF2	UAF18	N24-56-10.69W	31627.9400 31634.2796	0.28	0.0491	1.5527
1NF2	UAF19	N20-09-21.14W	29686.8277 29692.8987	0.29	0.0438	1.4770
1NF2	UAF2	N12-07-46.60W	39752.4022 39760.4525	0.22	0.0423	1.0652
1NF2	UAF20	N05-36-16.03W	28981.3548 28987.3082	0.35	0.0503	1.7345
1NF2	UAF21	N29-09-07.39W	27756.8288 27762.2952	0.33	0.0433	1.5598
1NF2	UAF22	N24-35-35.03W	25795.2318 25800.3640	0.38	0.0456	1.7694
1NF2	UAF23	N19-23-05.52W	25036.7090 25041.7211	0.38	0.0463	1.8493
1NF2	UAF24	N12-04-33.58W	25631.7719 25636.9529	0.37	0.0490	1.9108
1NF2	UAF25	N59-35-33.47W	41961.2801 41969.1289	0.22	0.0464	1.1061
1NF2	UAF26	N54-04-43.37W	38773.2380 38780.5576	0.25	0.0451	1.1629
1NF2	UAF27	N51-39-06.78W	37316.7047 37323.8157	0.25	0.0457	1.2244
1NF2	UAF29	N58-51-55.40W	40260.3853 40267.9719	0.22	0.0459	1.1411
1NF2	UAF3	N08-11-04.00W	39951.3036	0.24	0.0471	1.1787

			39959.4926			
1NF2	UAF30	N51-56-27.70W	33728.1274	0.31	0.0482	1.4278
			33734.6070			
1NF2	UAF31	N68-42-06.98W	40742.8299	0.21	0.0432	1.0601
			40750.4660			
1NF2	UAF32	N64-41-30.11W	40108.2032	0.24	0.0458	1.1427
			40115.6952			
1NF2	UAF33	N62-44-39.80W	37640.0046	0.24	0.0422	1.1214
			37647.1442			
1NF2	UAF34	N60-09-47.90W	36613.6217	0.25	0.0444	1.2120
			36620.6001			
1NF2	UAF35	N47-00-42.85W	29369.9008	0.32	0.0490	1.6696
			29375.6047			
1NF2	UAF36	N47-25-56.46W	26375.3825	0.36	0.0479	1.8164
			26380.5718			
1NF2	UAF37	N46-29-35.04W	23896.8019	0.44	0.0537	2.2463
			23901.5446			
1NF2	UAF4	N19-59-26.99W	38948.2457	0.22	0.0424	1.0882
			38956.0425			
1NF2	UAF5	N15-55-46.92W	38079.7842	0.22	0.0414	1.0884
			38087.4632			
1NF2	UAF6	N38-30-12.01W	43299.9872	0.17	0.0364	0.8401
			43308.2273			
1NF2	UAF7	N34-42-01.41W	41040.0798	0.18	0.0356	0.8686
			41048.0372			
1NF2	UAF8	N25-02-58.22W	37444.0961	0.24	0.0426	1.1387
			37451.4845			
1NF2	UAF9	N40-14-49.63W	41082.7835	0.21	0.0406	0.9888
			41090.6160			
1PD5	UAF1	N89-53-15.30E	3854.3789	2.35	0.0390	10.1169
			3855.1171			
1PD5	UAF10	S11-21-21.62W	7846.0494	1.08	0.0430	5.4748
			7847.5236			
1PD5	UAF11	S18-31-01.54E	8540.2747	0.95	0.0397	4.6534
			8541.8833			
1PD5	UAF12	S37-08-40.54E	8423.6920	1.00	0.0416	4.9384
			8425.2931			
1PD5	UAF13	S22-20-49.83W	10077.0351	0.78	0.0404	4.0071
			10078.9027			
1PD5	UAF14	S09-56-19.99W	9970.1600	0.85	0.0439	4.4015
			9972.0151			
1PD5	UAF15	S05-24-26.42E	11500.4542	0.75	0.0464	4.0325
			11502.6057			
1PD5	UAF16	S16-04-23.91E	13572.0855	0.61	0.0407	3.0009
			13574.6478			
1PD5	UAF17	S23-08-18.37E	15438.7365	0.45	0.0341	2.2115
			15441.6767			
1PD5	UAF18	S42-10-40.07E	13234.7467	0.67	0.0456	3.4467
			13237.3251			
1PD5	UAF19	S48-28-30.49E	16017.2095	0.51	0.0419	2.6187
			16020.3937			
1PD5	UAF2	N88-26-24.80E	13873.1333	0.61	0.0414	2.9869
			13875.8617			
1PD5	UAF20	S63-33-18.75E	21656.6657	0.45	0.0521	2.4072
			21660.9881			
1PD5	UAF21	S31-24-39.14E	16692.7083	0.54	0.0429	2.5672
			16695.9033			

1PD5	UAF22	S37-22-57.98E	18917.8108	0.51	0.0456	2.4092
			18921.4686			
1PD5	UAF23	S43-05-29.85E	20362.4260	0.46	0.0465	2.2850
			20366.3868			
1PD5	UAF24	S51-28-23.74E	21549.4700	0.45	0.0469	2.1765
			21553.7018			
1PD5	UAF25	S39-00-05.11W	22195.5254	0.43	0.0444	2.0019
			22199.5551			
1PD5	UAF26	S30-14-52.44W	18220.7580	0.49	0.0461	2.5279
			18224.0986			
1PD5	UAF27	S24-40-28.78W	16875.4478	0.53	0.0465	2.7530
			16878.5723			
1PD5	UAF28	S00-54-45.70W	16444.0116	0.69	0.0597	3.6290
			16447.1115			
1PD5	UAF29	S34-42-34.85W	21495.8834	0.44	0.0429	1.9961
			21499.8166			
1PD5	UAF3	N86-20-29.95E	16567.2050	0.57	0.0452	2.7256
			16570.5039			
1PD5	UAF30	S13-46-05.08W	18218.3087	0.51	0.0512	2.8104
			18221.7111			
1PD5	UAF31	S33-36-03.52W	28440.8234	0.31	0.0418	1.4683
			28445.9986			
1PD5	UAF32	S33-20-08.13W	25544.4051	0.36	0.0453	1.7732
			25549.0374			
1PD5	UAF33	S27-52-35.77W	24039.2373	0.36	0.0428	1.7810
			24043.6670			
1PD5	UAF34	S25-12-05.63W	22403.3927	0.40	0.0439	1.9608
			22407.5419			
1PD5	UAF35	S02-17-09.63E	18476.2378	0.50	0.0472	2.5538
			18479.7271			
1PD5	UAF36	S07-42-45.48E	20833.8685	0.45	0.0466	2.2391
			20837.8559			
1PD5	UAF37	S12-30-31.96E	22571.5179	0.46	0.0535	2.3702
			22575.8763			
1PD5	UAF4	S78-02-39.10E	9103.1631	0.92	0.0394	4.3304
			9104.9324			
1PD5	UAF5	S80-58-22.89E	11917.2308	0.71	0.0390	3.2758
			11919.5643			
1PD5	UAF6	S45-49-19.40W	6603.5498	1.14	0.0366	5.5449
			6604.7697			
1PD5	UAF7	S13-32-04.41W	4882.1820	1.46	0.0374	7.6656
			4883.1023			
1PD5	UAF8	S54-21-35.57E	7834.5059	1.07	0.0410	5.2313
			7836.0073			
1PD5	UAF9	S31-13-21.30W	8337.9092	0.97	0.0413	4.9543
			8339.4533			
NR22	UAF1	N27-25-32.62E	21183.7334	0.41	0.0431	2.0362
			21187.7115			
NR22	UAF10	N21-25-48.47E	11927.4784	0.72	0.0418	3.5086
			11929.6706			
NR22	UAF11	N38-50-48.11E	13734.9718	0.59	0.0405	2.9472
			13737.5015			
NR22	UAF13	N12-19-53.28E	9698.8509	0.82	0.0409	4.2155
			9700.6094			
NR22	UAF14	N24-59-03.21E	9901.2928	0.88	0.0437	4.4097
			9903.0942			
NR22	UAF15	N43-33-48.14E	10137.8677	0.92	0.0431	4.2535

			10139.7213			
NR22	UAF16	N59-13-19.28E	11244.1493	0.75	0.0407	3.6233
			11246.2236			
NR22	UAF17	N68-59-02.74E	12822.4759	0.58	0.0354	2.7621
			12824.8623			
NR22	UAF20	N70-06-37.96E	26897.8554	0.40	0.0479	1.7808
			26903.1148			
NR22	UAF21	N72-41-51.26E	15294.7004	0.58	0.0431	2.8197
			15297.5621			
NR22	UAF22	N77-47-17.72E	17791.0909	0.54	0.0477	2.6834
			17794.4548			
NR22	UAF23	N78-47-38.33E	20198.8571	0.47	0.0460	2.2775
			20202.7006			
NR22	UAF24	N76-43-08.52E	23386.8257	0.43	0.0461	1.9715
			23391.3210			
NR22	UAF25	N79-08-45.82W	8212.6228	1.12	0.0454	5.5297
			8214.0788			
NR22	UAF29	N79-56-12.27W	6436.3507	1.38	0.0450	6.9845
			6437.5008			
NR22	UAF31	S63-33-03.15W	10986.4426	0.79	0.0424	3.8565
			10988.3955			
NR22	UAF32	S72-37-12.49W	8524.0617	1.07	0.0454	5.3260
			8525.5711			
NR22	UAF33	S65-18-15.53W	5874.4577	1.45	0.0428	7.2810
			5875.5151			
NR22	UAF34	S67-54-51.15W	3924.6128	2.35	0.0418	10.6538
			3925.3228			
NR22	UAF6	N04-41-59.84E	14241.2476	0.53	0.0373	2.6200
			14243.8235			
NR22	UAF7	N18-43-06.02E	14833.2711	0.49	0.0377	2.5387
			14836.0067			
NR22	UAF9	N07-43-02.02E	11771.6735	0.70	0.0420	3.5657
			11773.8069			

Error Propagation

Station Coordinate Standard Deviations (FeetInt)

Station	N	E	Elev
1NF2	0.00708	0.00672	0.01224
1PD5	0.00000	0.00000	0.00000
NR22	0.00806	0.00783	0.01212
UAF1	0.01795	0.01593	0.02640
UAF10	0.01779	0.01655	0.02378
UAF11	0.01640	0.01588	0.02223
UAF12	0.01669	0.01695	0.02485
UAF13	0.01639	0.01568	0.02195
UAF14	0.01800	0.01673	0.02759
UAF15	0.01888	0.01709	0.02625
UAF16	0.01668	0.01646	0.02227
UAF17	0.01404	0.01371	0.01943
UAF18	0.01941	0.01675	0.02873
UAF19	0.01694	0.01645	0.02537
UAF2	0.01671	0.01694	0.02818
UAF20	0.02032	0.02028	0.04564
UAF21	0.01783	0.01757	0.02733

UAF22	0.01876	0.01904	0.03802
UAF23	0.01868	0.01872	0.03560
UAF24	0.01993	0.01862	0.03495
UAF25	0.01853	0.01863	0.02944
UAF26	0.01929	0.01723	0.03564
UAF27	0.01965	0.01679	0.03269
UAF28	0.02442	0.02236	0.04066
UAF29	0.01792	0.01838	0.03192
UAF3	0.01873	0.01851	0.03648
UAF30	0.02104	0.01834	0.04023
UAF31	0.01706	0.01749	0.02955
UAF32	0.01830	0.01867	0.02888
UAF33	0.01713	0.01746	0.02552
UAF34	0.01845	0.01737	0.02506
UAF35	0.01921	0.01850	0.03459
UAF36	0.01899	0.01858	0.03731
UAF37	0.02168	0.02059	0.05111
UAF4	0.01655	0.01611	0.02469
UAF5	0.01655	0.01608	0.02507
UAF6	0.01506	0.01484	0.02349
UAF7	0.01529	0.01409	0.02402
UAF8	0.01654	0.01675	0.02404
UAF9	0.01687	0.01607	0.02676

Station Coordinate Error Ellipses (FeetInt)
Confidence Region = 95%

Station	Semi-Major Axis	Semi-Minor Axis	Azimuth of Major Axis	Elev
1NF2	0.01736	0.01642	169-34	0.02399
1PD5	0.00000	0.00000	0-00	0.00000
NR22	0.01976	0.01914	170-33	0.02375
UAF1	0.04414	0.03876	168-08	0.05174
UAF10	0.04397	0.04004	160-14	0.04661
UAF11	0.04031	0.03872	18-23	0.04358
UAF12	0.04179	0.04055	119-32	0.04870
UAF13	0.04038	0.03811	19-55	0.04301
UAF14	0.04408	0.04092	175-12	0.05409
UAF15	0.04647	0.04154	166-29	0.05145
UAF16	0.04084	0.04027	10-08	0.04364
UAF17	0.03439	0.03353	9-20	0.03809
UAF18	0.04763	0.04085	171-49	0.05631
UAF19	0.04217	0.03952	148-35	0.04973
UAF2	0.04174	0.04062	119-47	0.05524
UAF20	0.05277	0.04639	135-25	0.08945
UAF21	0.04408	0.04256	32-51	0.05357
UAF22	0.04697	0.04556	59-29	0.07453
UAF23	0.04653	0.04499	133-02	0.06977
UAF24	0.04878	0.04558	179-00	0.06849
UAF25	0.04651	0.04443	131-33	0.05770
UAF26	0.04723	0.04217	0-54	0.06985
UAF27	0.04817	0.04103	174-25	0.06406
UAF28	0.06144	0.05286	153-07	0.07970
UAF29	0.04592	0.04291	124-03	0.06257
UAF3	0.04677	0.04435	141-34	0.07149
UAF30	0.05151	0.04488	0-58	0.07885
UAF31	0.04291	0.04165	106-48	0.05791

UAF32	0.04575	0.04474	75-41	0.05660
UAF33	0.04326	0.04139	57-25	0.05002
UAF34	0.04548	0.04218	161-23	0.04912
UAF35	0.04836	0.04386	146-24	0.06779
UAF36	0.04682	0.04515	153-21	0.07312
UAF37	0.05361	0.04984	157-35	0.10018
UAF4	0.04052	0.03941	6-31	0.04840
UAF5	0.04115	0.03868	31-00	0.04914
UAF6	0.03687	0.03632	3-13	0.04603
UAF7	0.03747	0.03445	6-39	0.04708
UAF8	0.04105	0.04044	106-32	0.04711
UAF9	0.04146	0.03916	16-00	0.05246

Relative Error Ellipses (FeetInt)
Confidence Region = 95%

Stations From	To	Semi-Major Axis	Semi-Minor Axis	Azimuth of Major Axis	Vertical
1NF2	UAF1	0.04414	0.03846	167-44	0.05215
1NF2	UAF10	0.04427	0.04031	159-30	0.04800
1NF2	UAF11	0.04123	0.03928	17-16	0.04646
1NF2	UAF12	0.04398	0.04270	125-20	0.05306
1NF2	UAF13	0.04102	0.03867	17-45	0.04561
1NF2	UAF14	0.04493	0.04173	175-11	0.05597
1NF2	UAF15	0.04770	0.04233	165-50	0.05392
1NF2	UAF16	0.04165	0.04109	174-36	0.04639
1NF2	UAF17	0.03562	0.03496	3-57	0.04117
1NF2	UAF18	0.04970	0.04244	172-18	0.05942
1NF2	UAF19	0.04393	0.04099	149-52	0.05362
1NF2	UAF2	0.04290	0.04192	118-40	0.05766
1NF2	UAF20	0.05274	0.04644	134-44	0.08946
1NF2	UAF21	0.04444	0.04300	34-16	0.05412
1NF2	UAF22	0.04743	0.04561	57-21	0.07439
1NF2	UAF23	0.04668	0.04528	128-50	0.07056
1NF2	UAF24	0.04904	0.04590	176-28	0.06876
1NF2	UAF25	0.04653	0.04421	133-25	0.05800
1NF2	UAF26	0.04845	0.04324	0-08	0.07161
1NF2	UAF27	0.04929	0.04207	174-23	0.06512
1NF2	UAF29	0.04595	0.04286	124-34	0.06340
1NF2	UAF3	0.04780	0.04518	140-10	0.07295
1NF2	UAF30	0.05225	0.04557	0-33	0.07993
1NF2	UAF31	0.04323	0.04210	100-27	0.05906
1NF2	UAF32	0.04630	0.04533	71-12	0.05760
1NF2	UAF33	0.04338	0.04173	59-35	0.05076
1NF2	UAF34	0.04577	0.04244	160-46	0.05026
1NF2	UAF35	0.04932	0.04474	147-49	0.06861
1NF2	UAF36	0.04818	0.04597	153-22	0.07500
1NF2	UAF37	0.05438	0.05044	158-49	0.10120
1NF2	UAF4	0.04262	0.04118	3-55	0.05229
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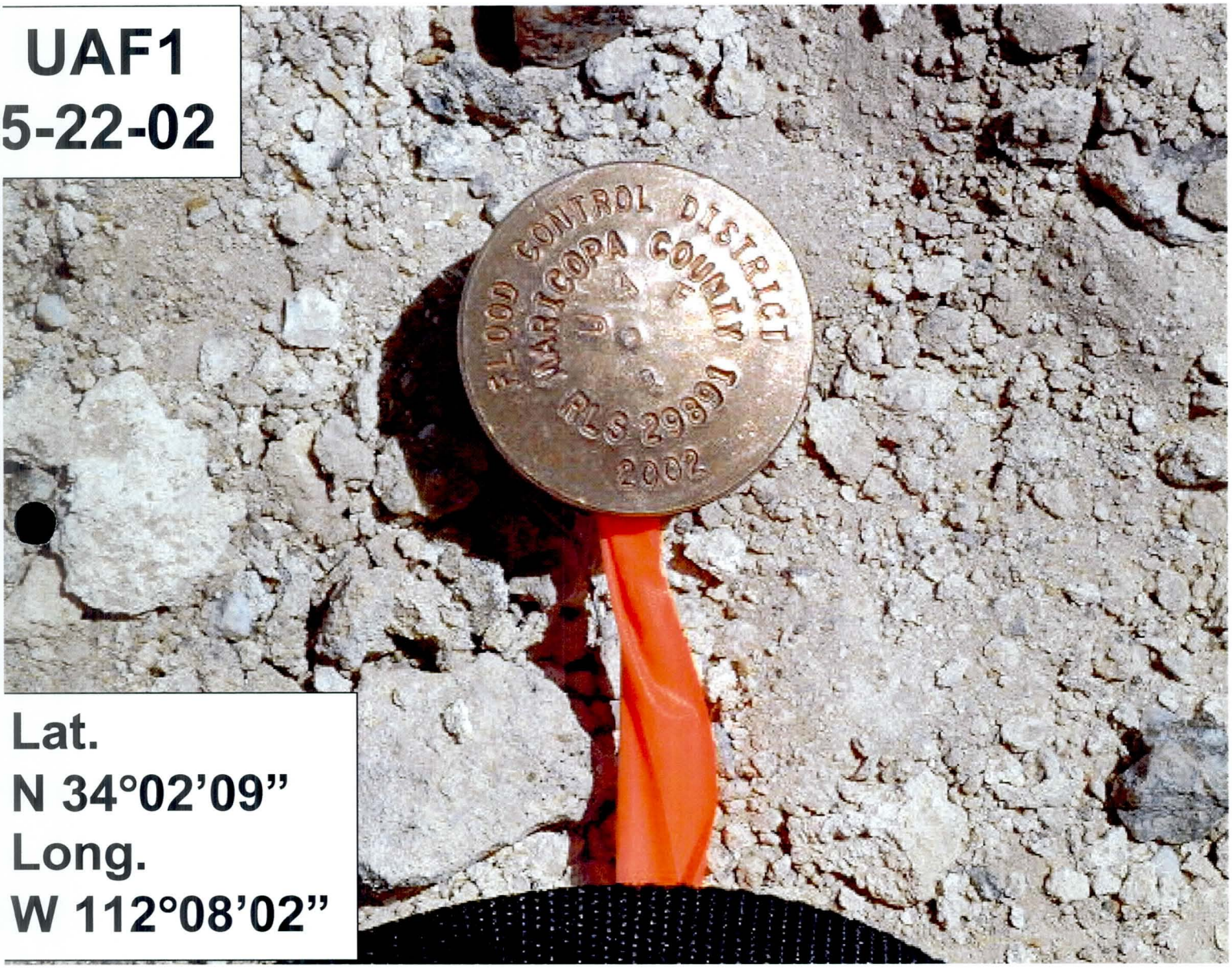
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FLOOD CONTROL DISTRICT
MARICOPA COUNTY
ELS 29891
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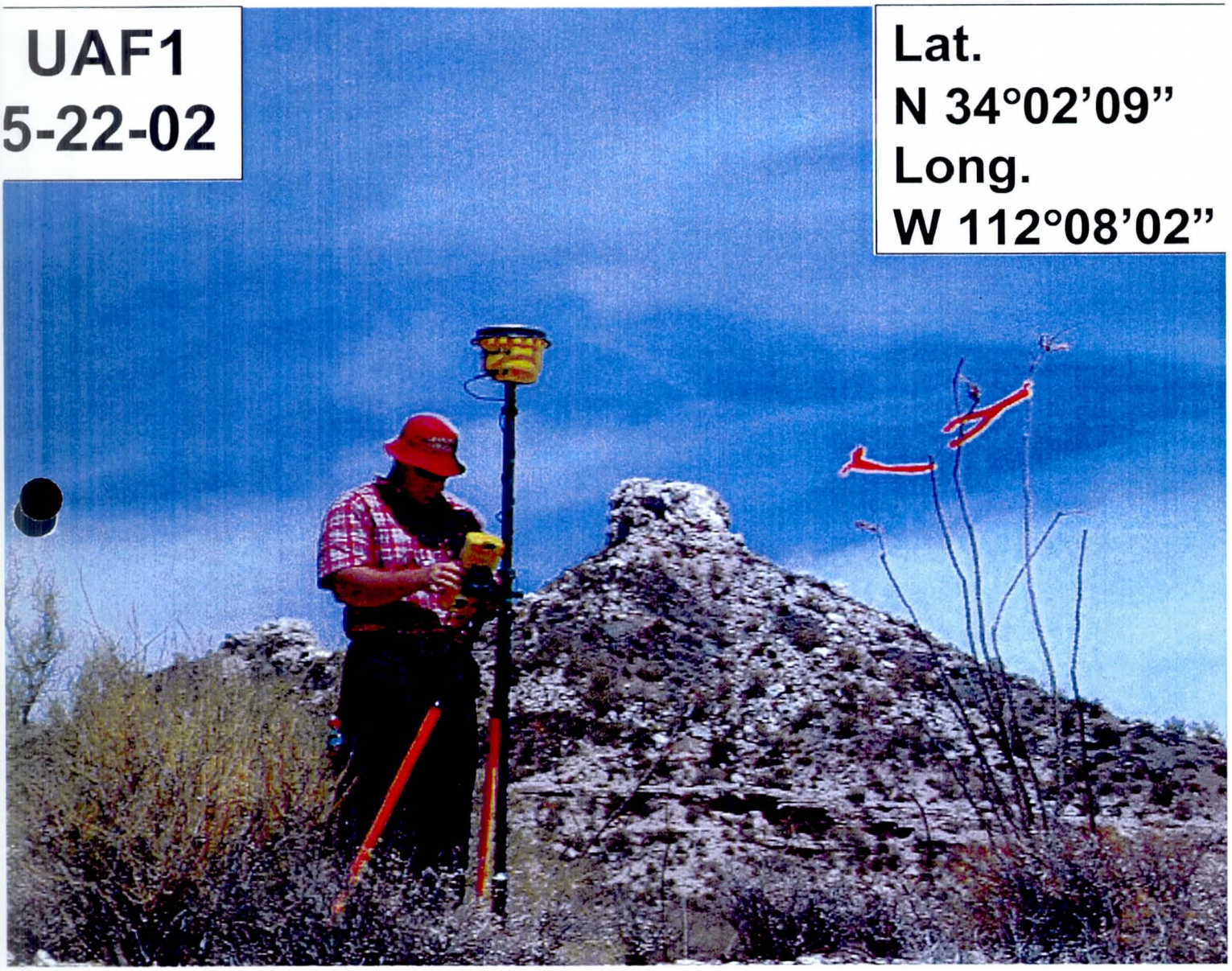
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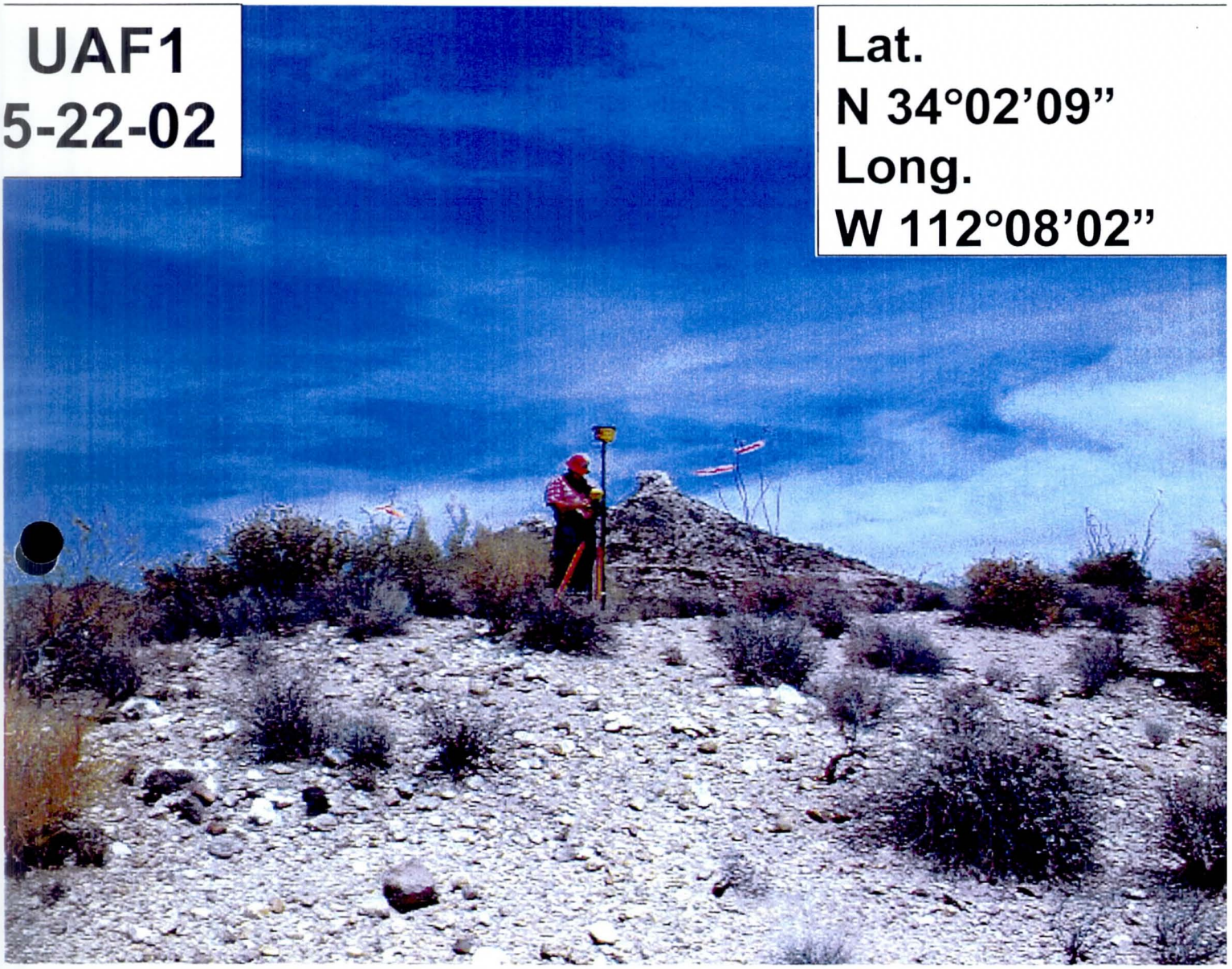

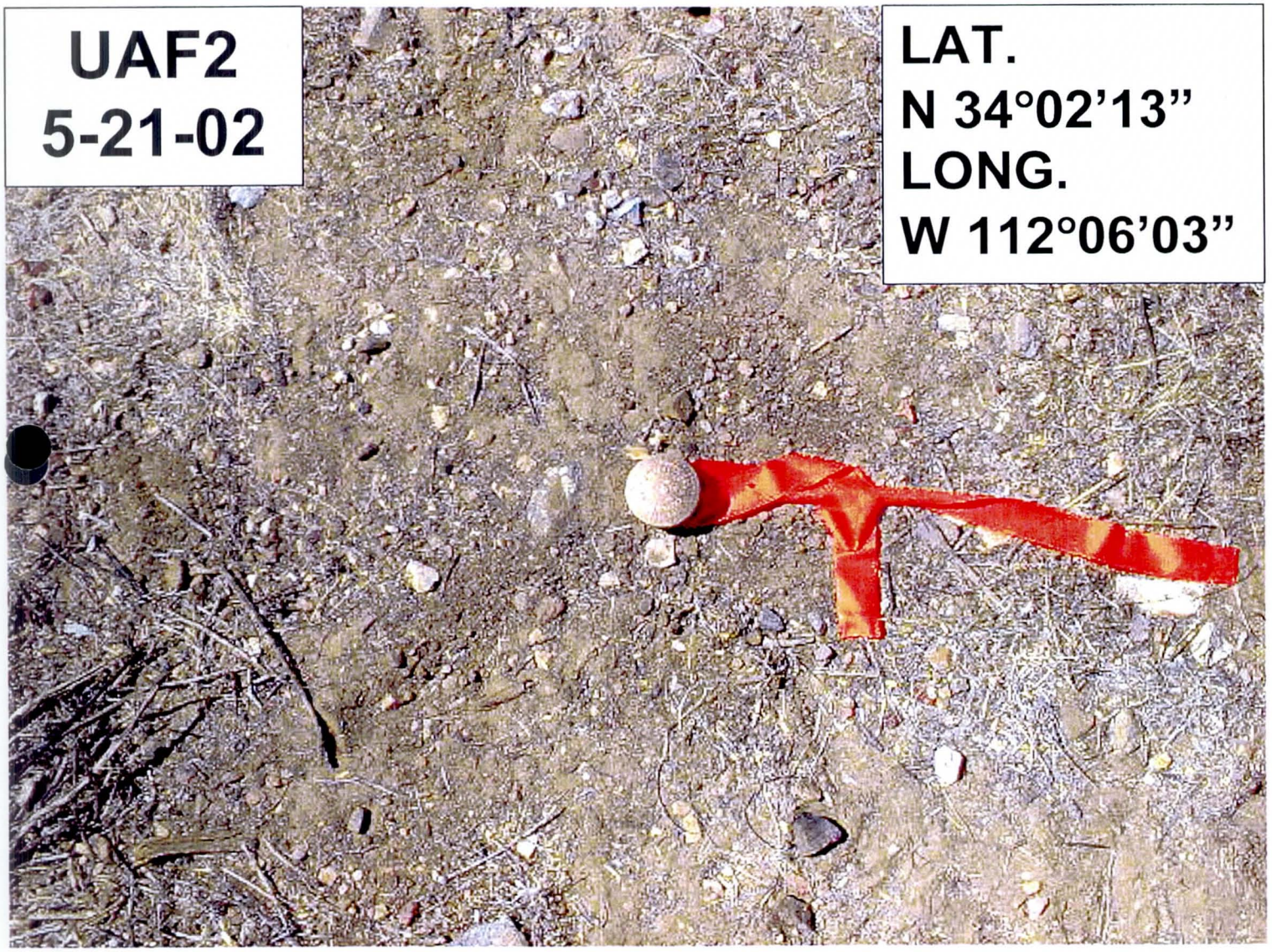
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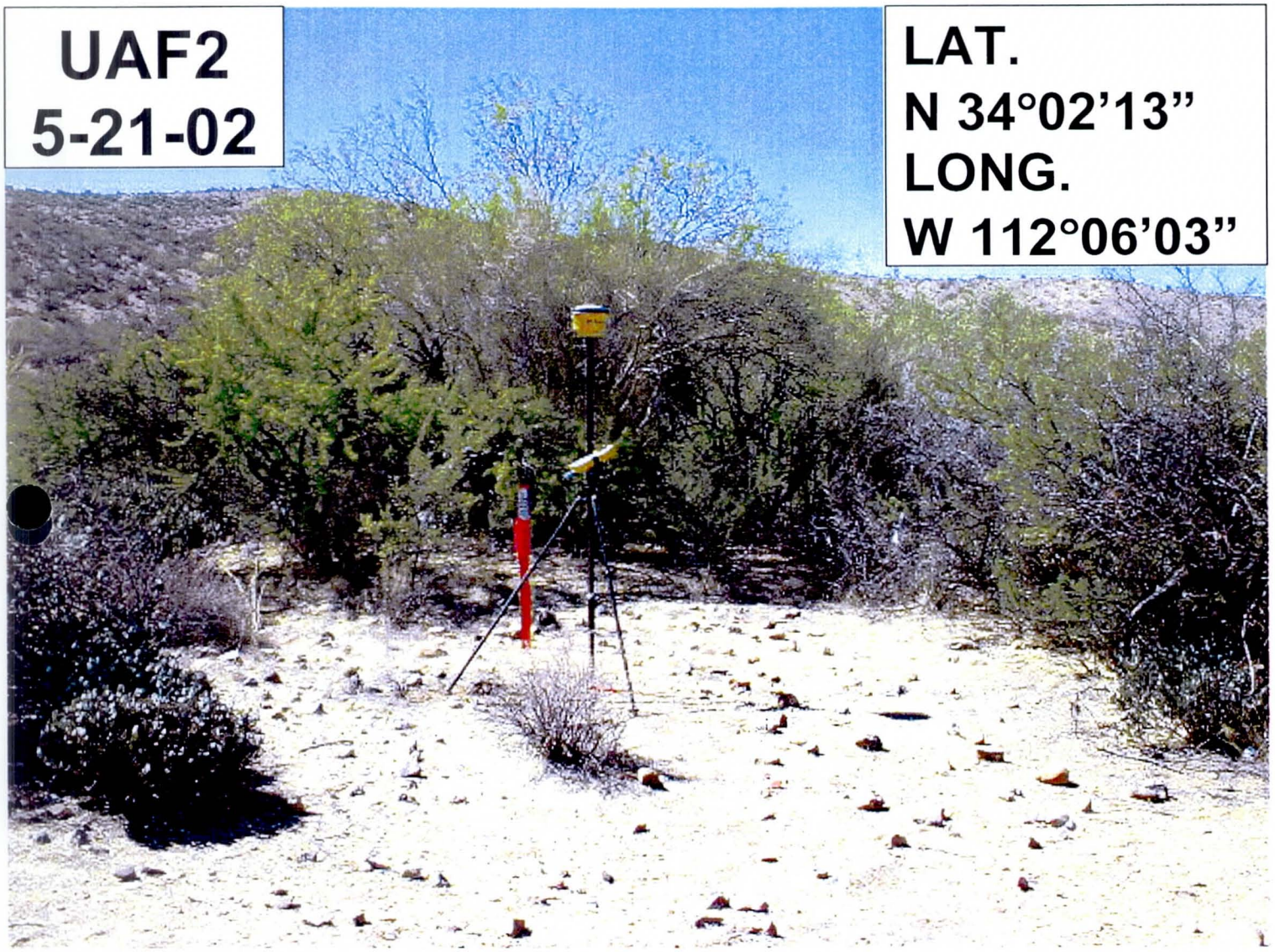
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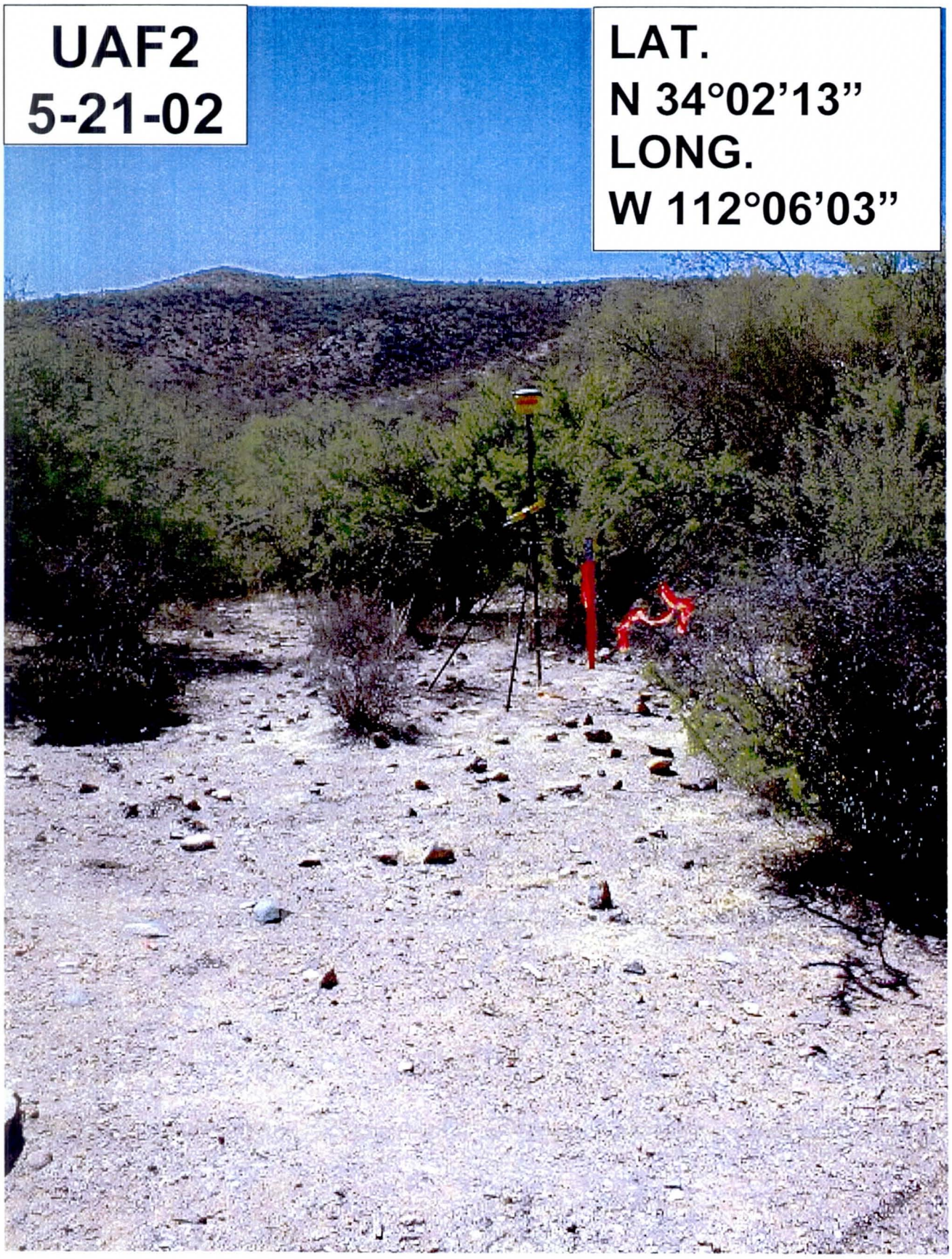
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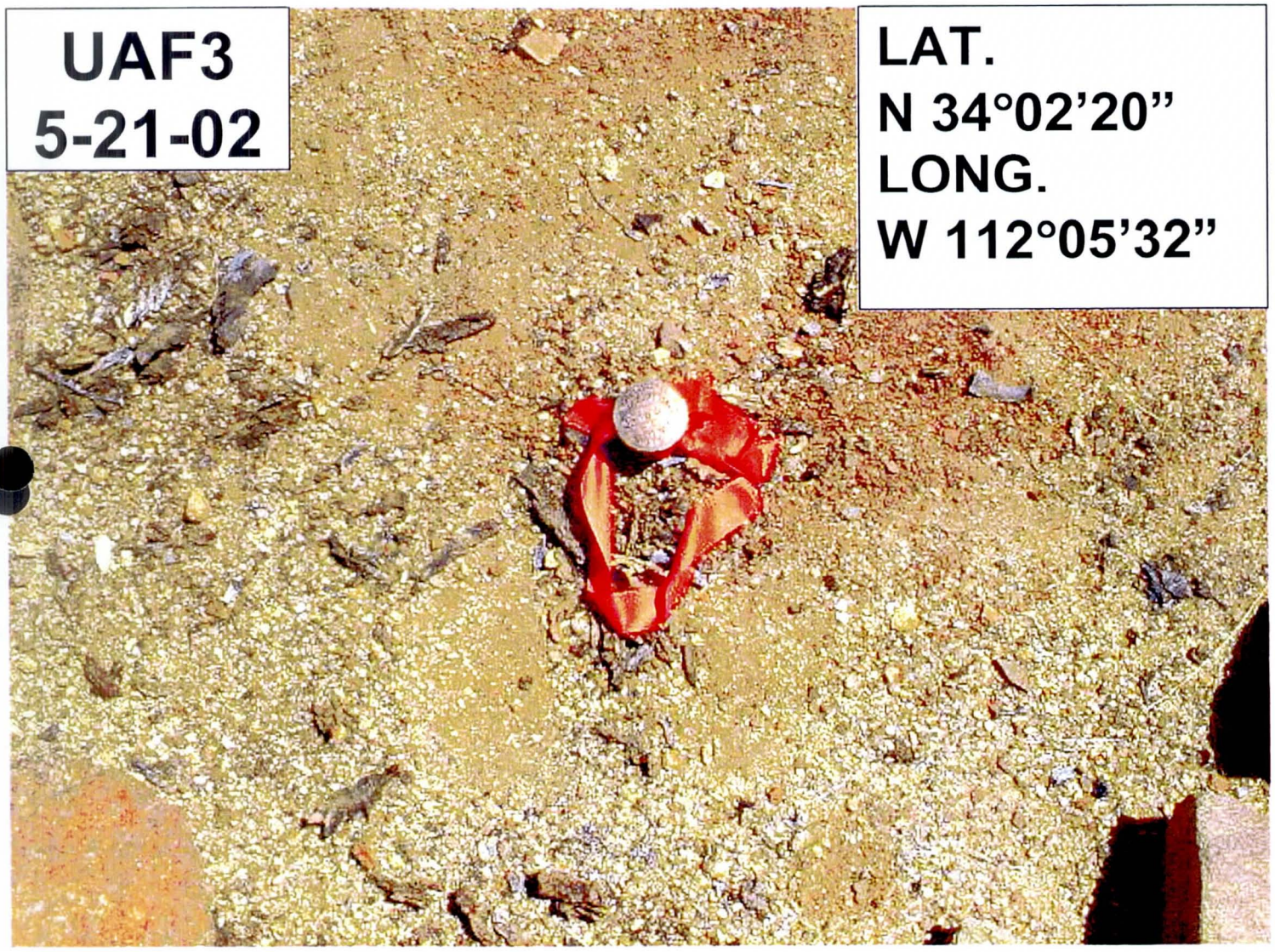
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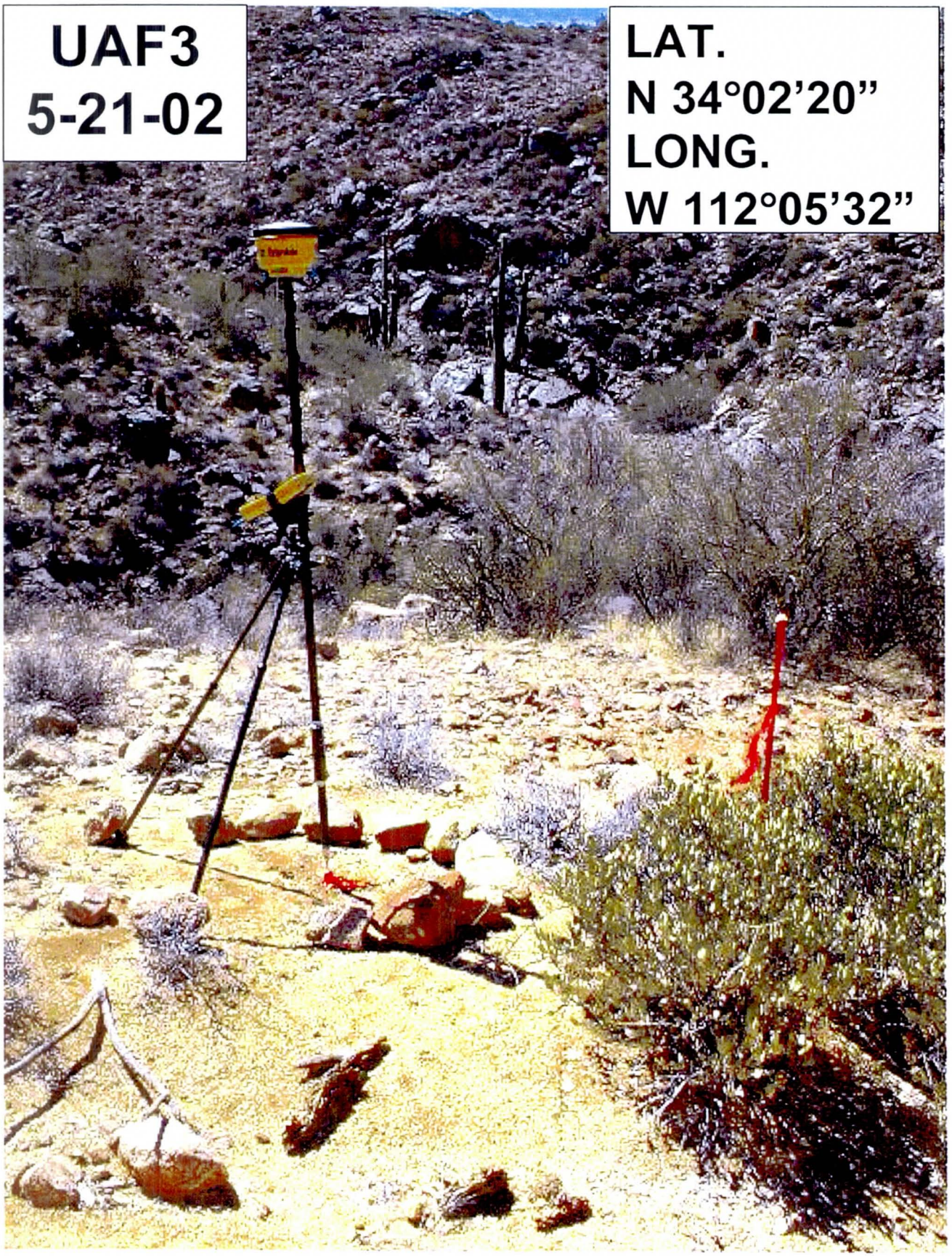
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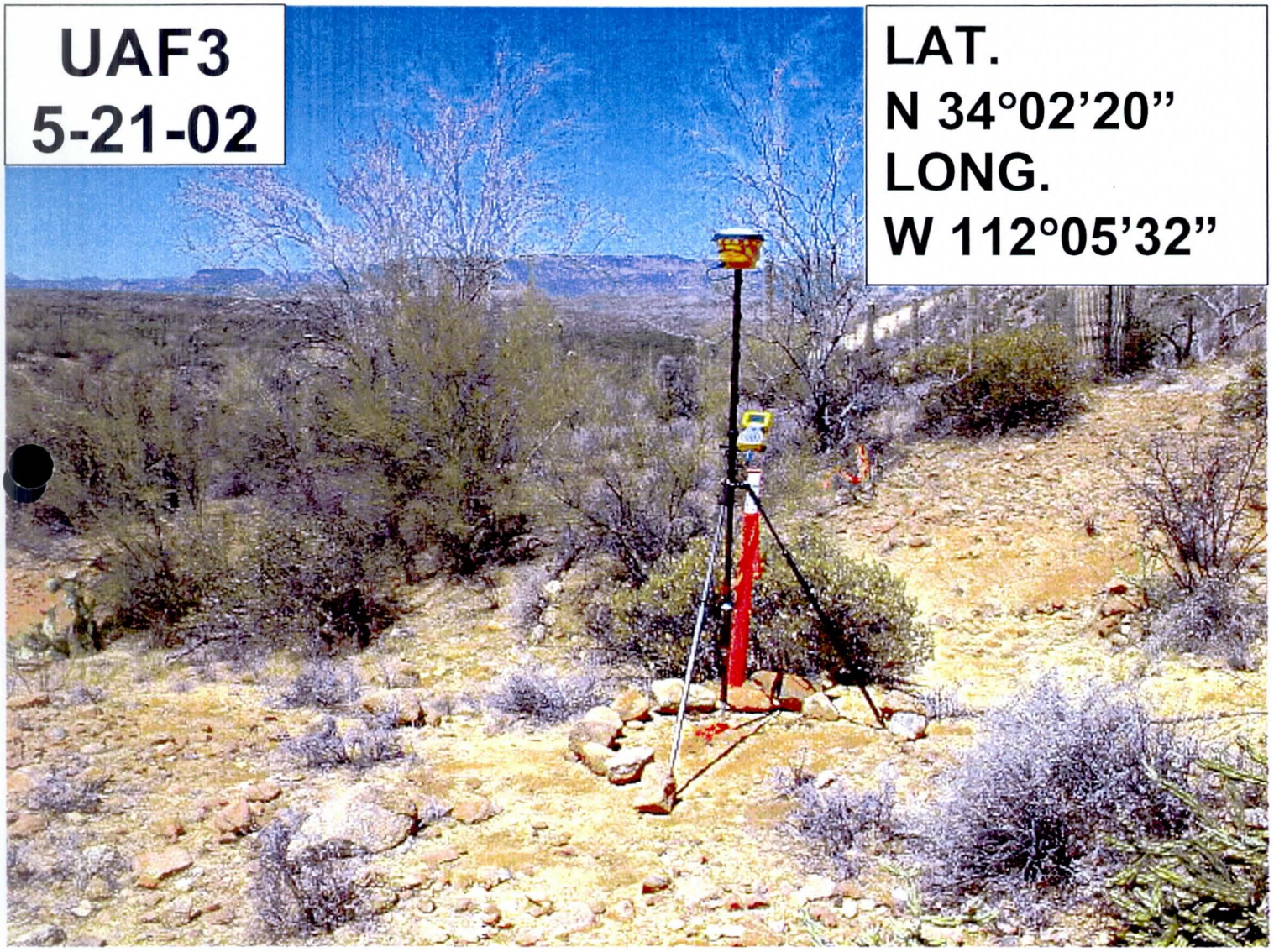
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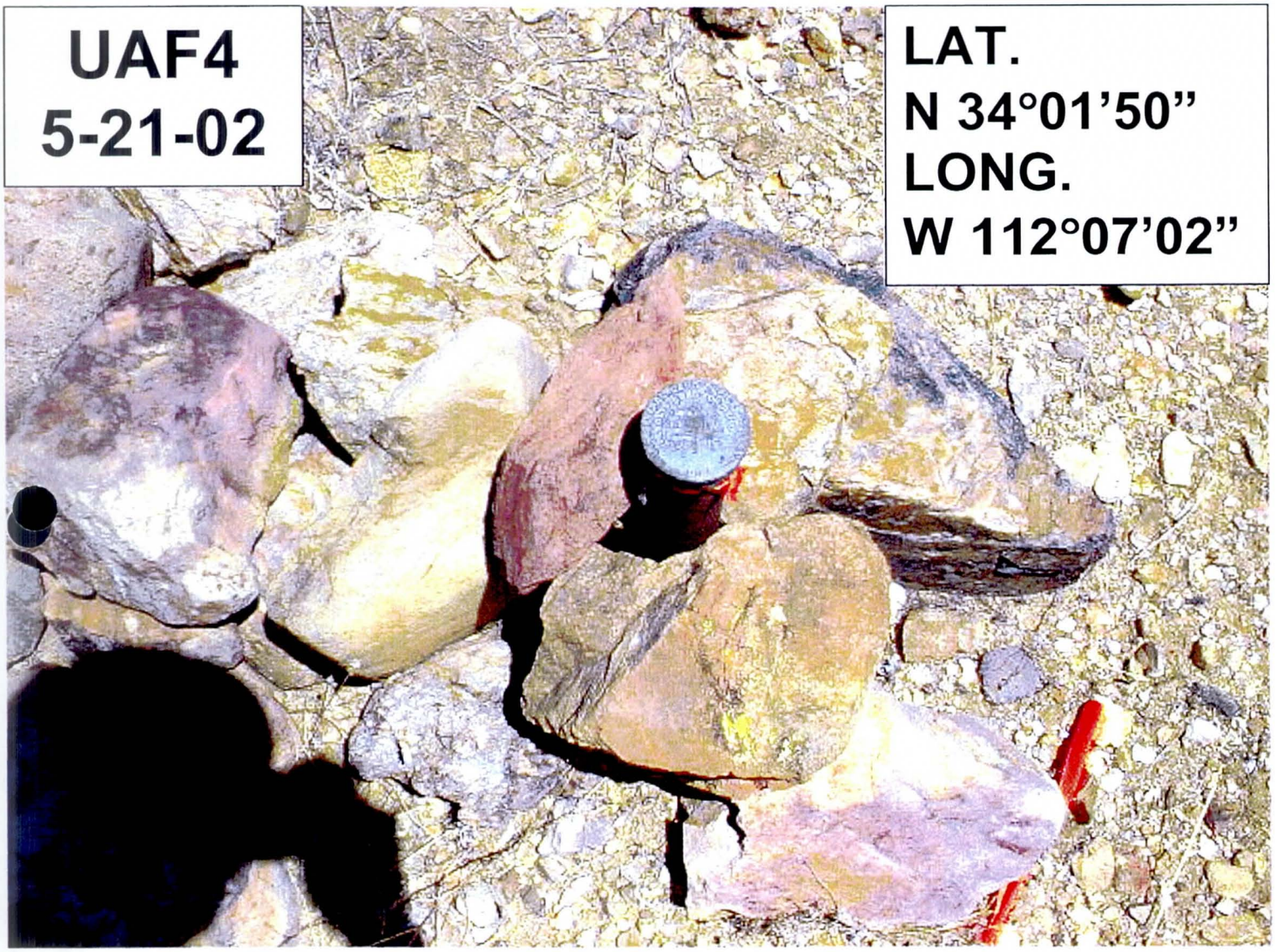
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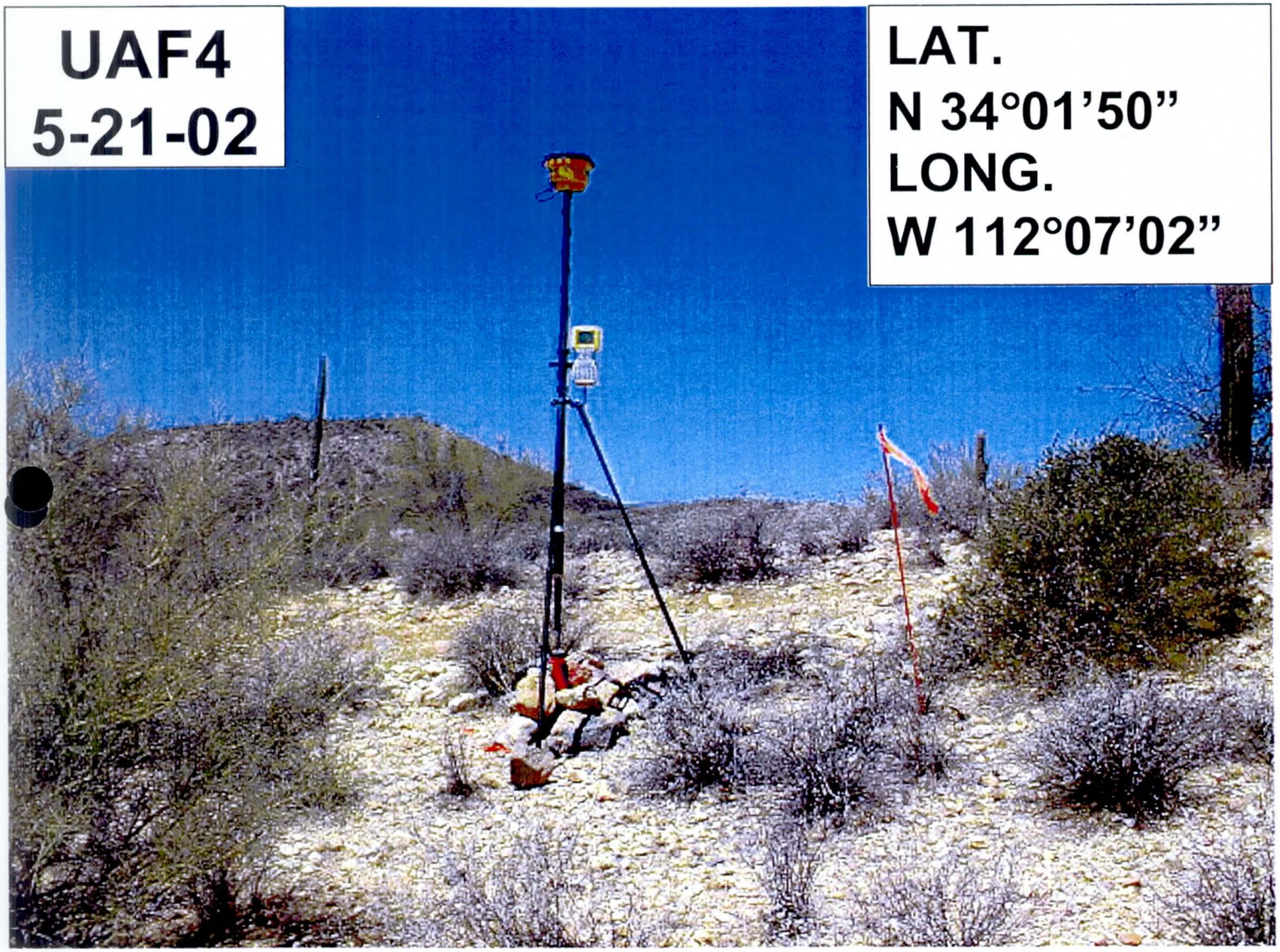
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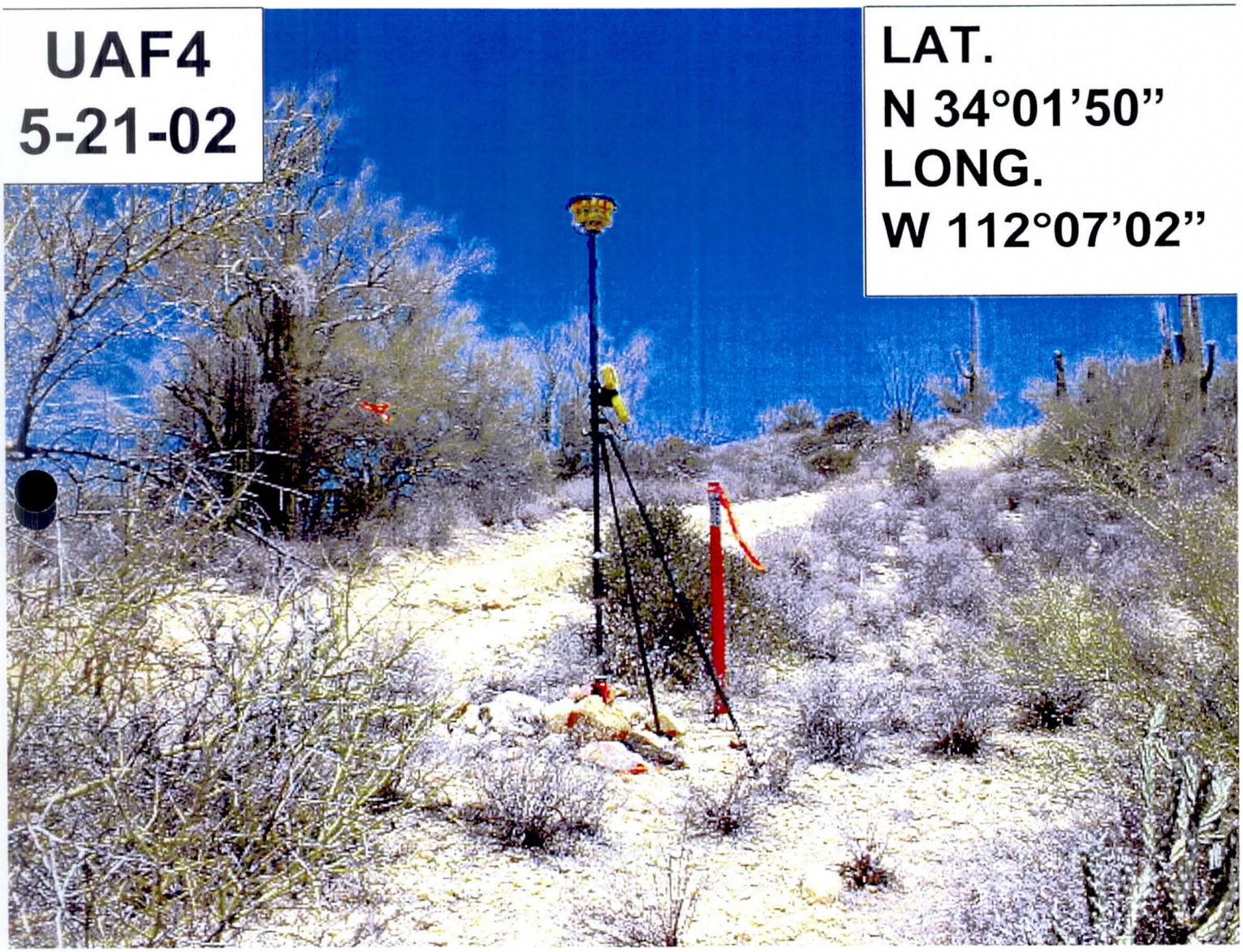
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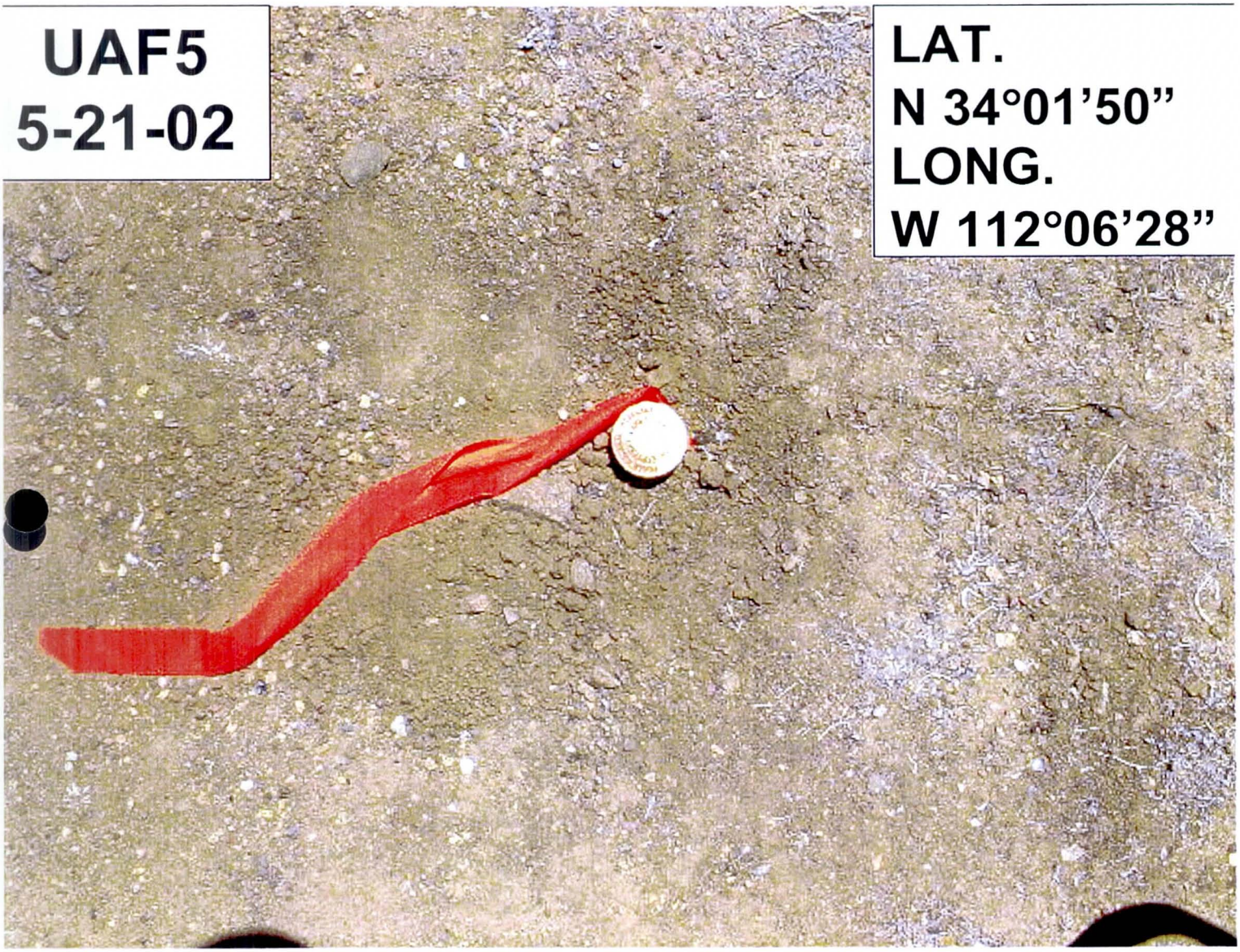
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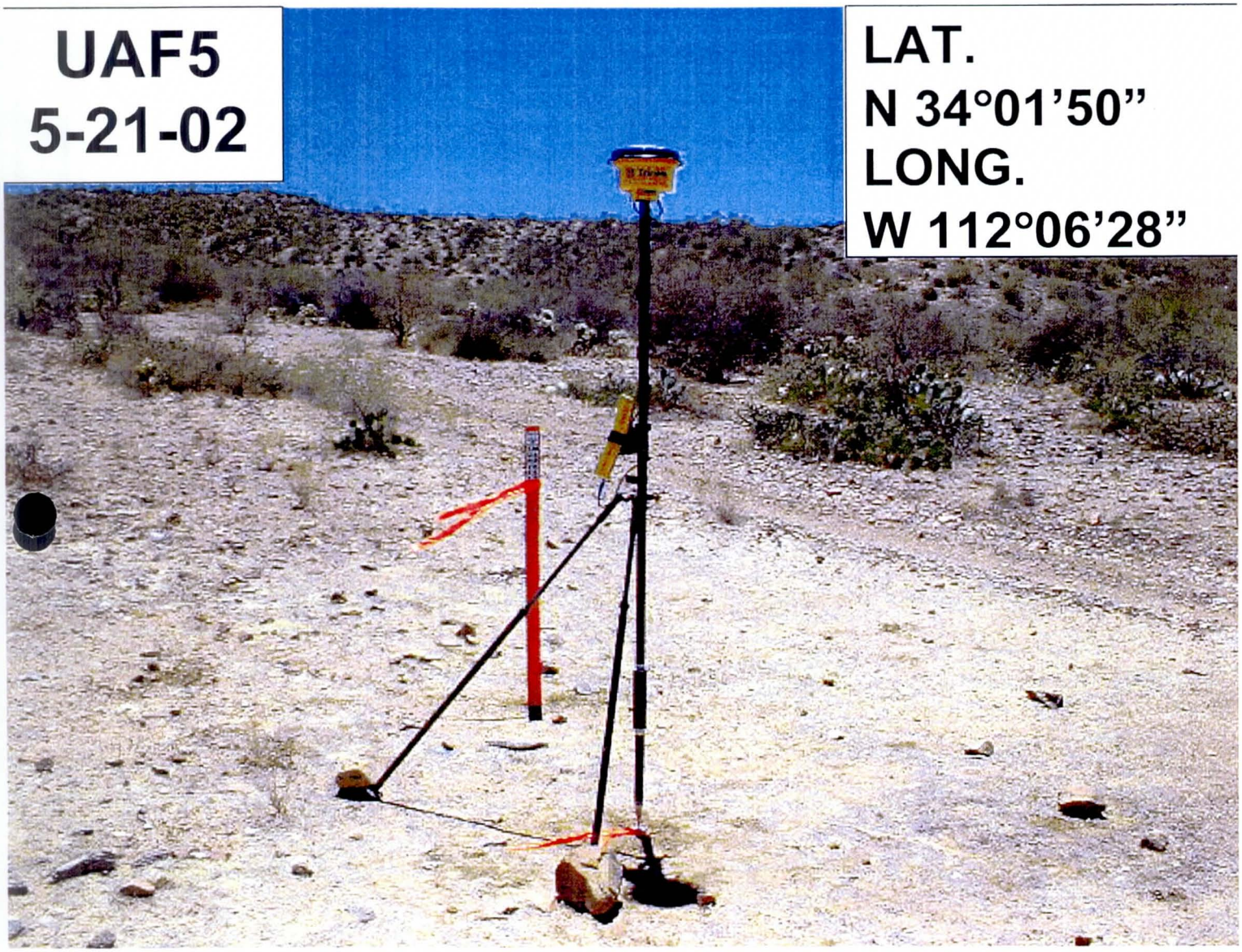

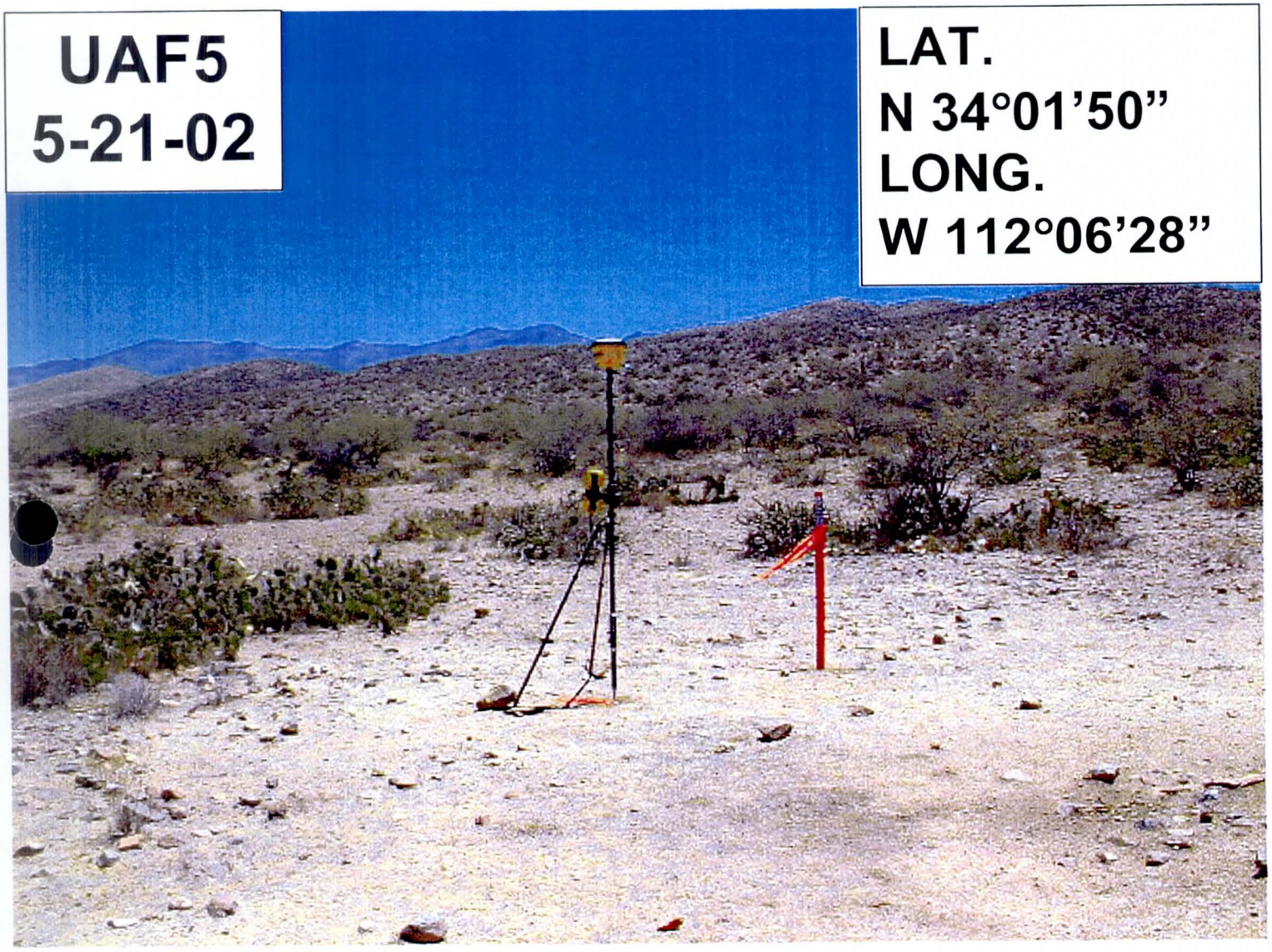
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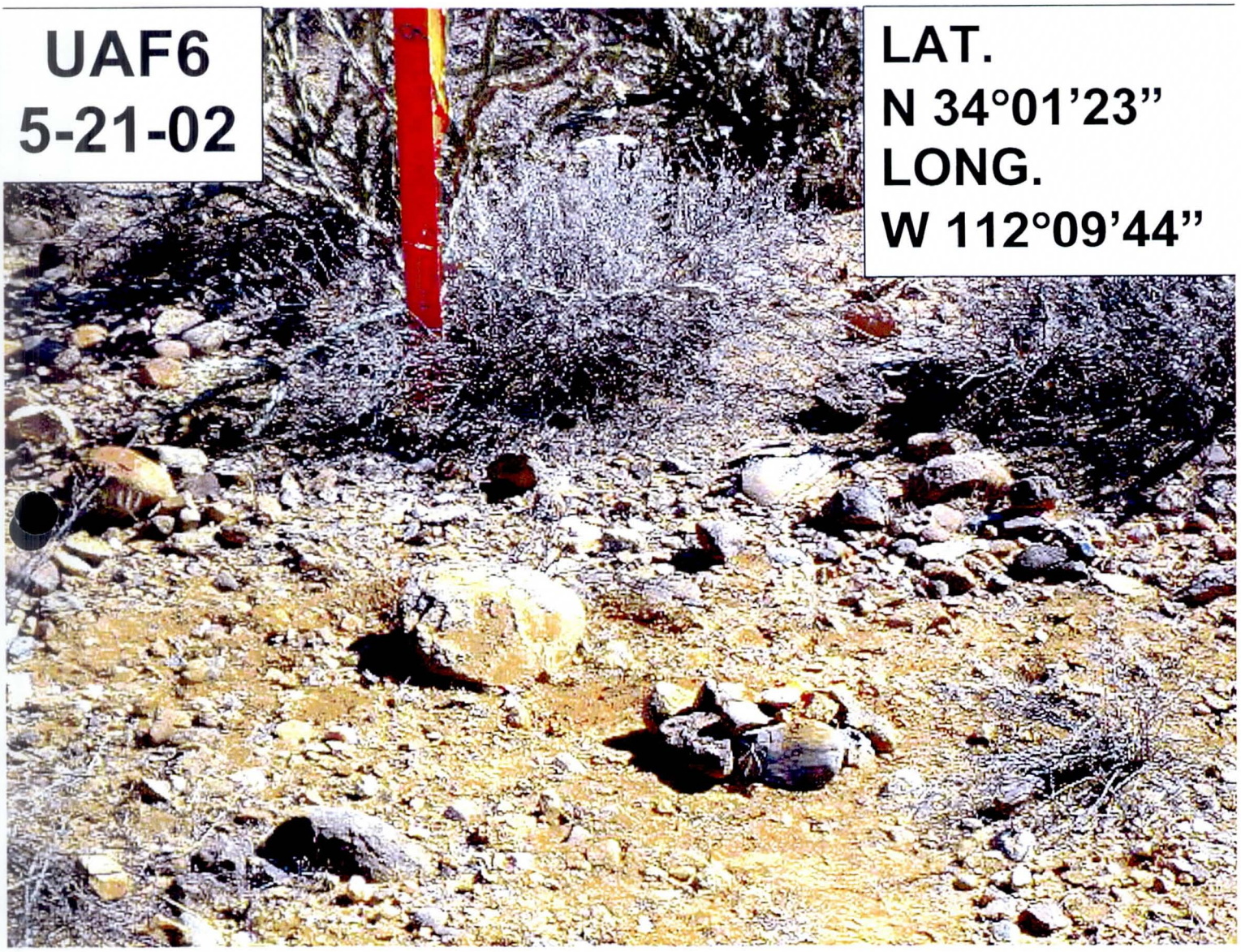
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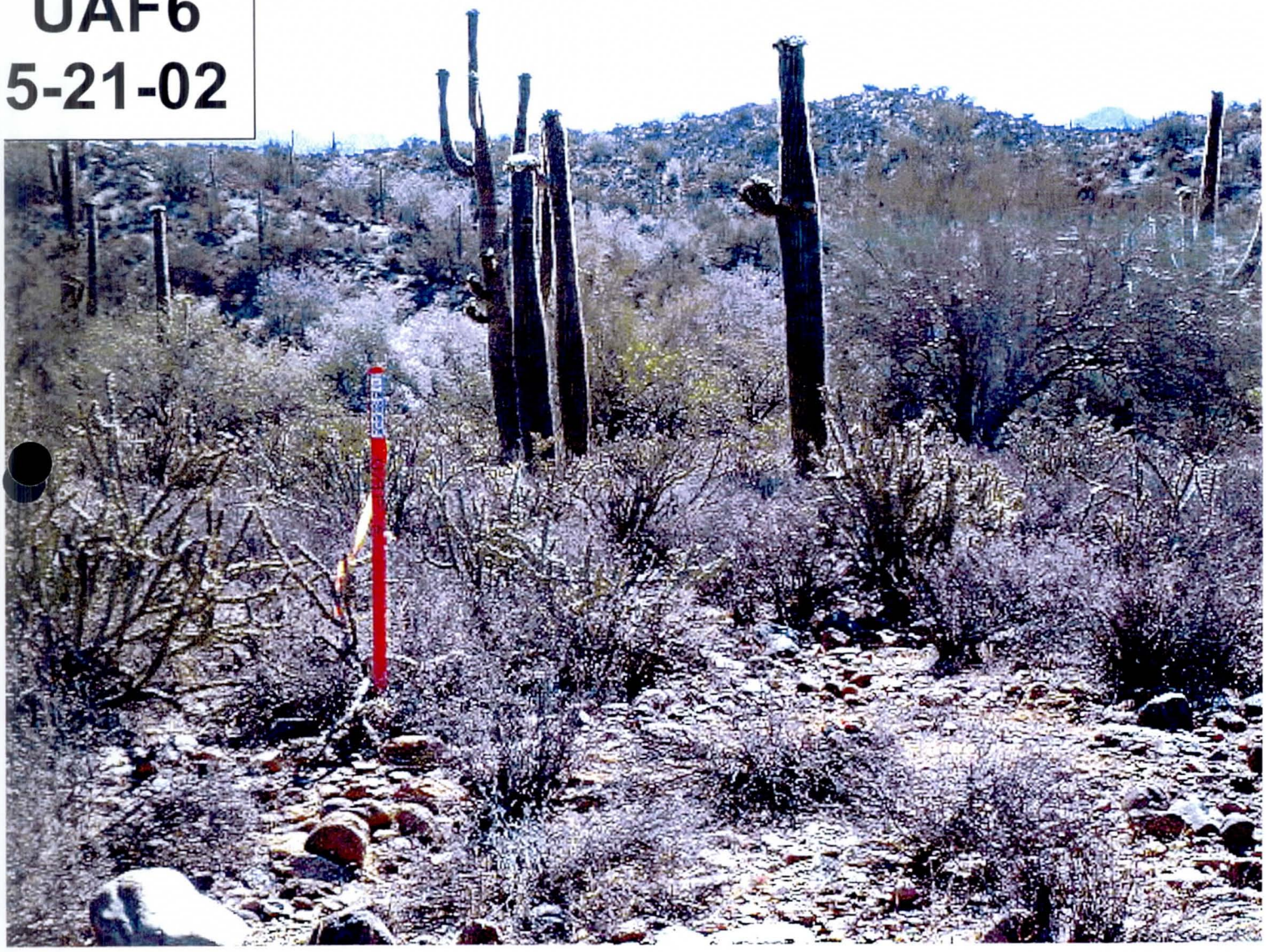

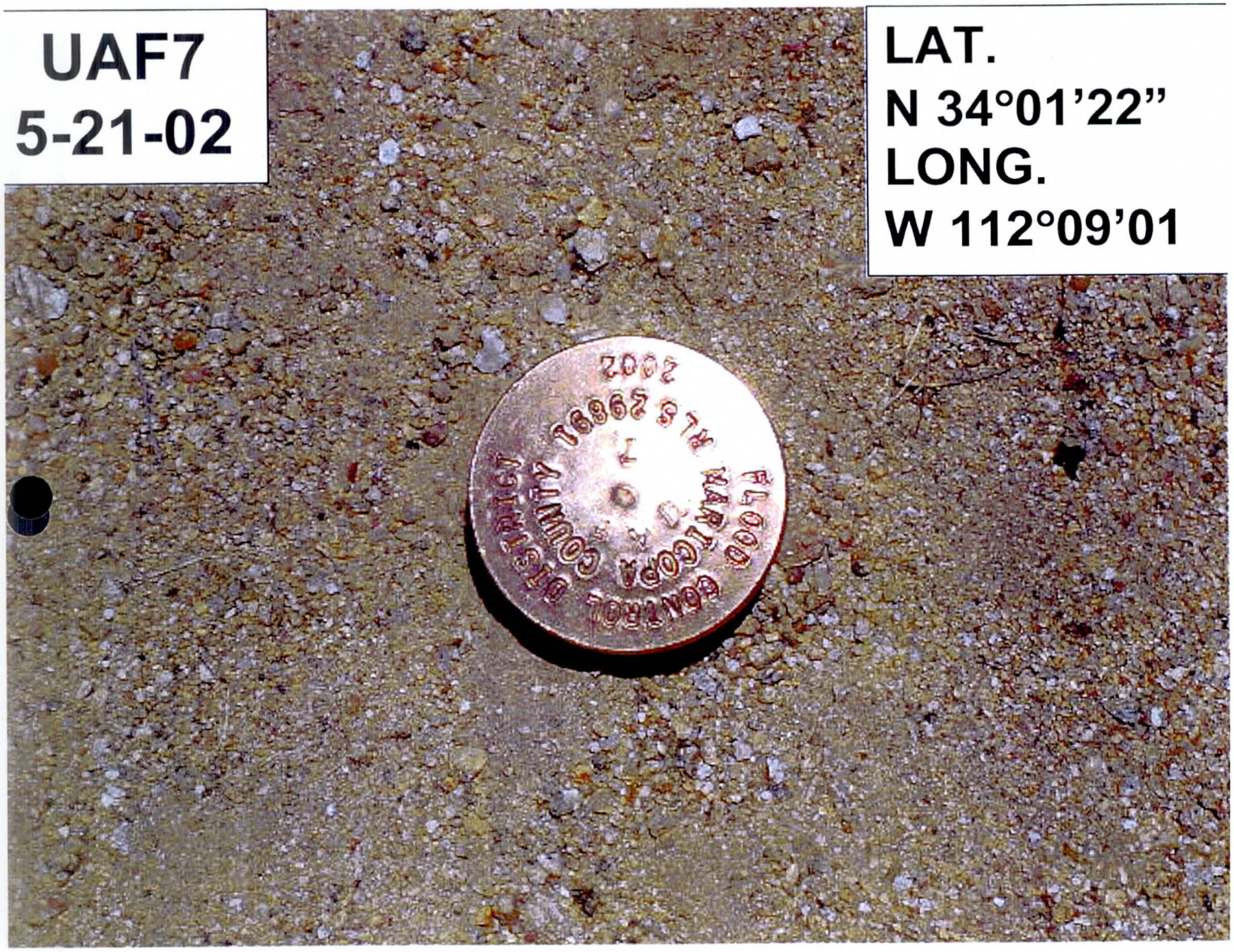
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FLOOD CONTROL DISTRICT
MARICOPA COUNTY
FLS 29691
2002

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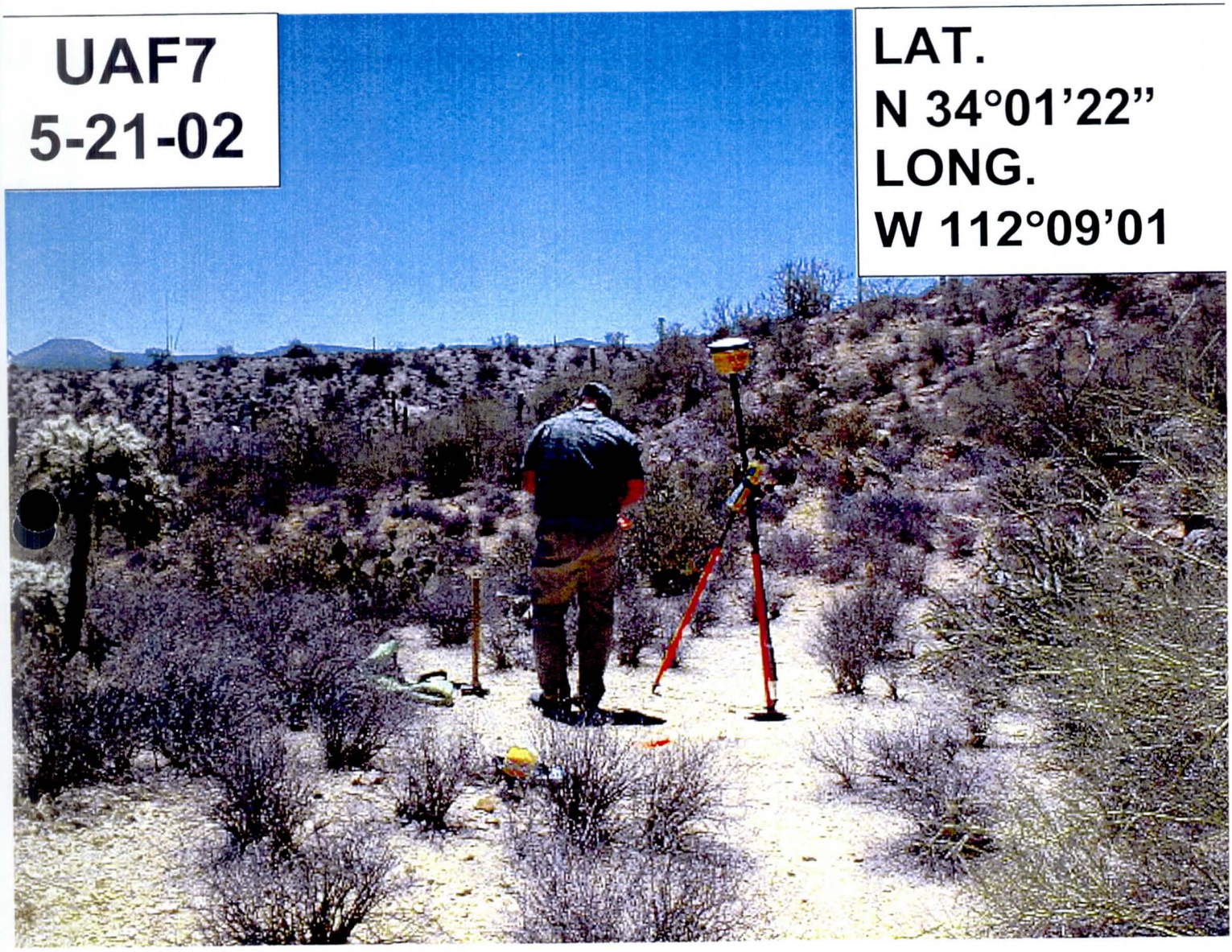

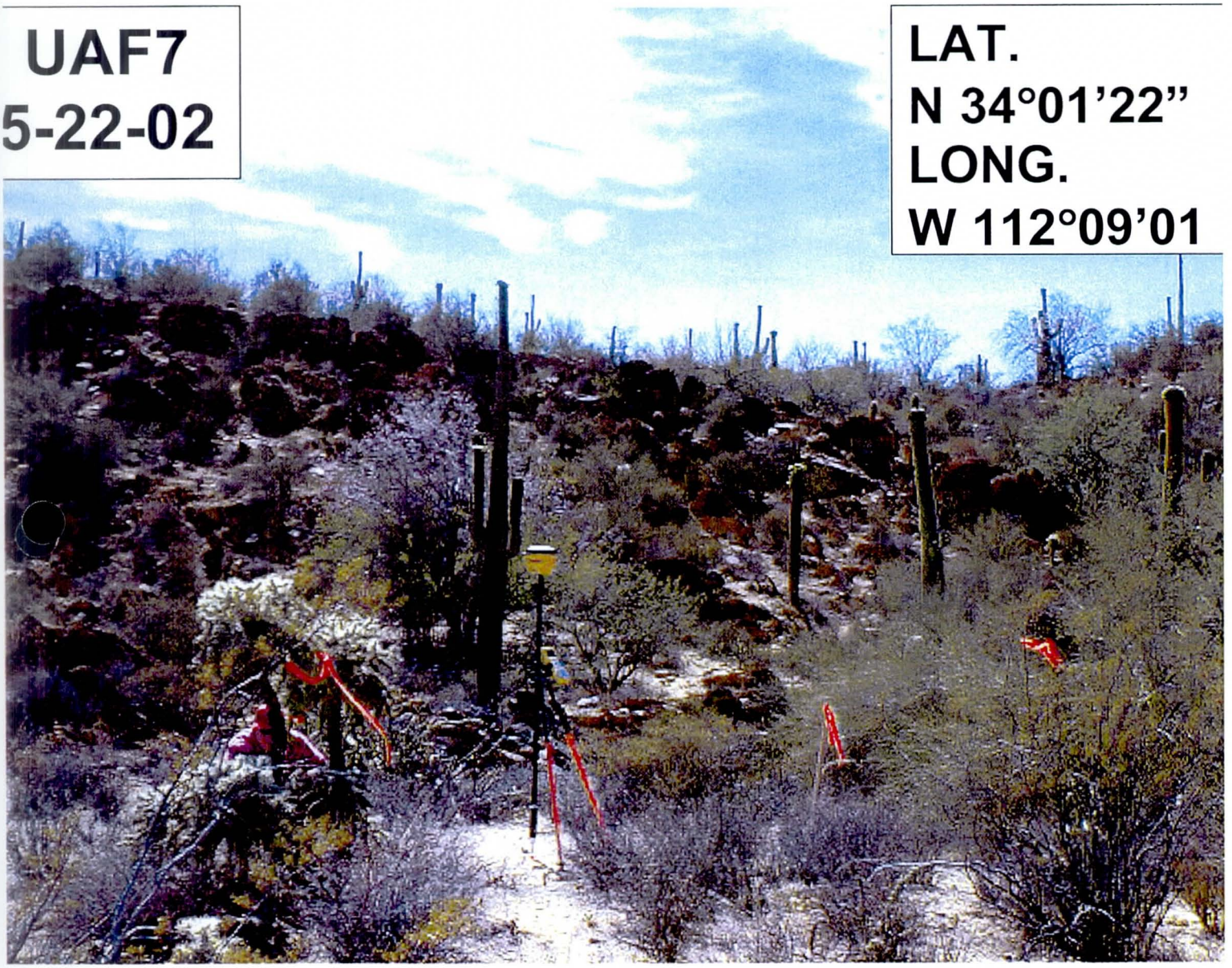
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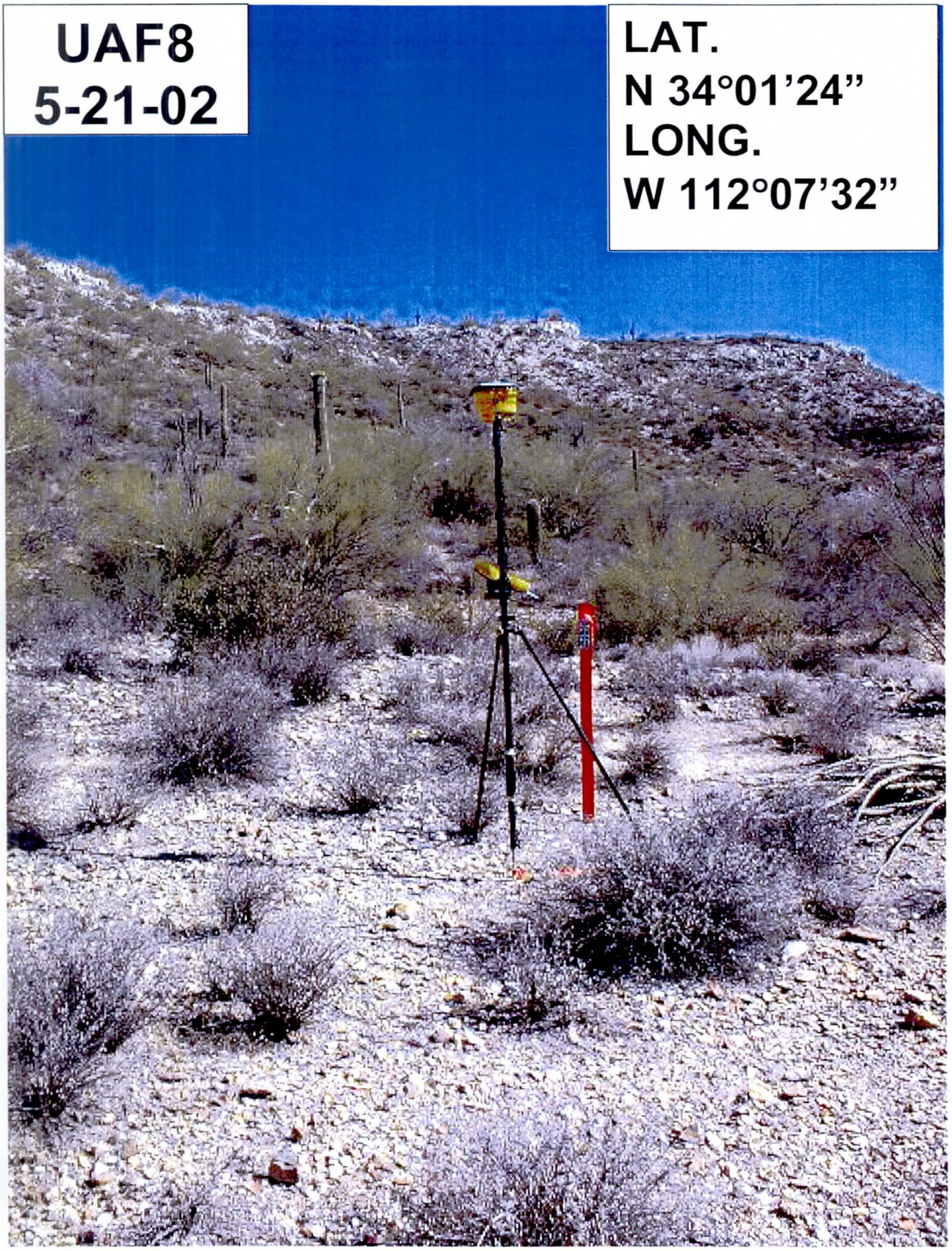
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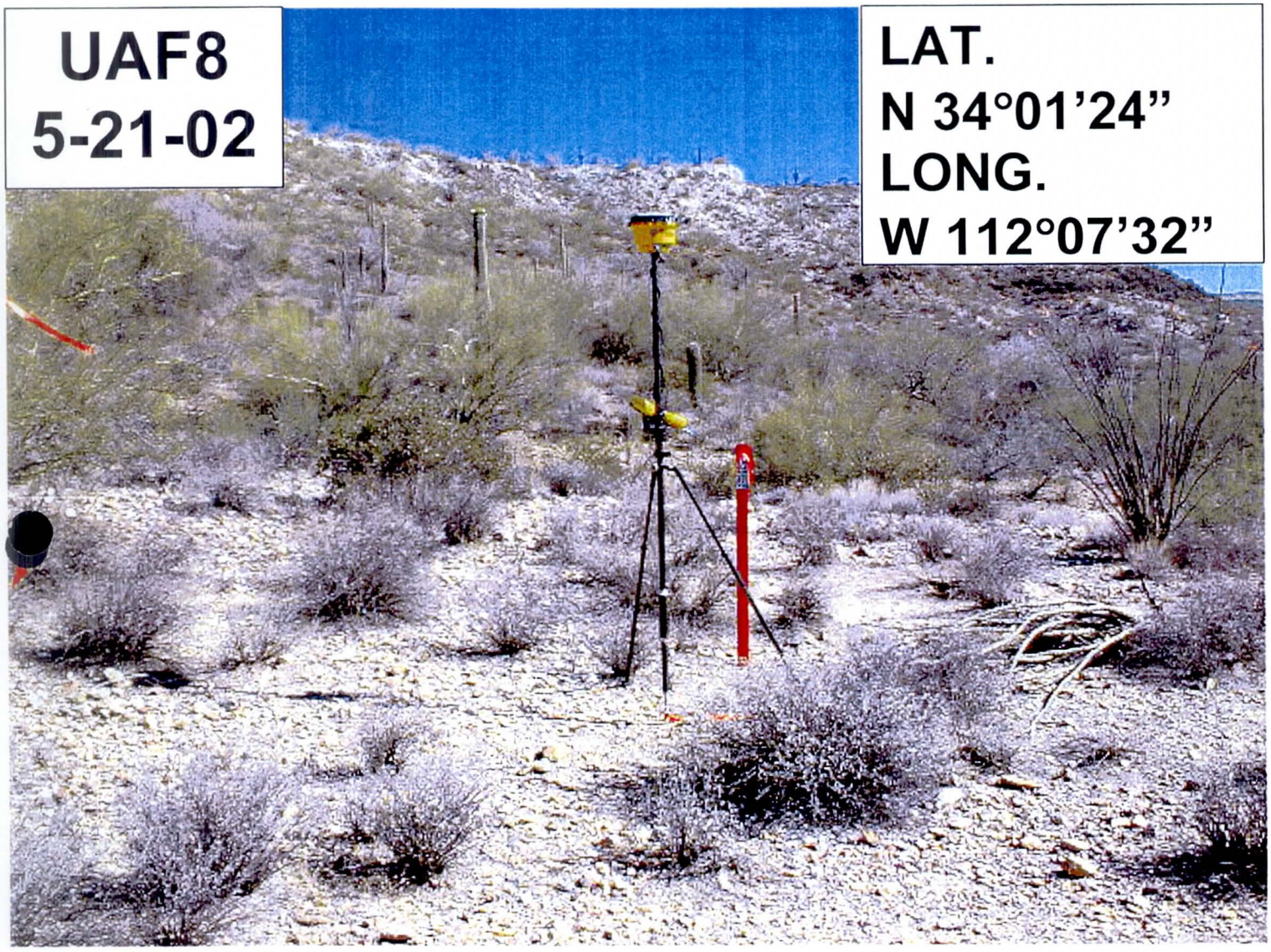
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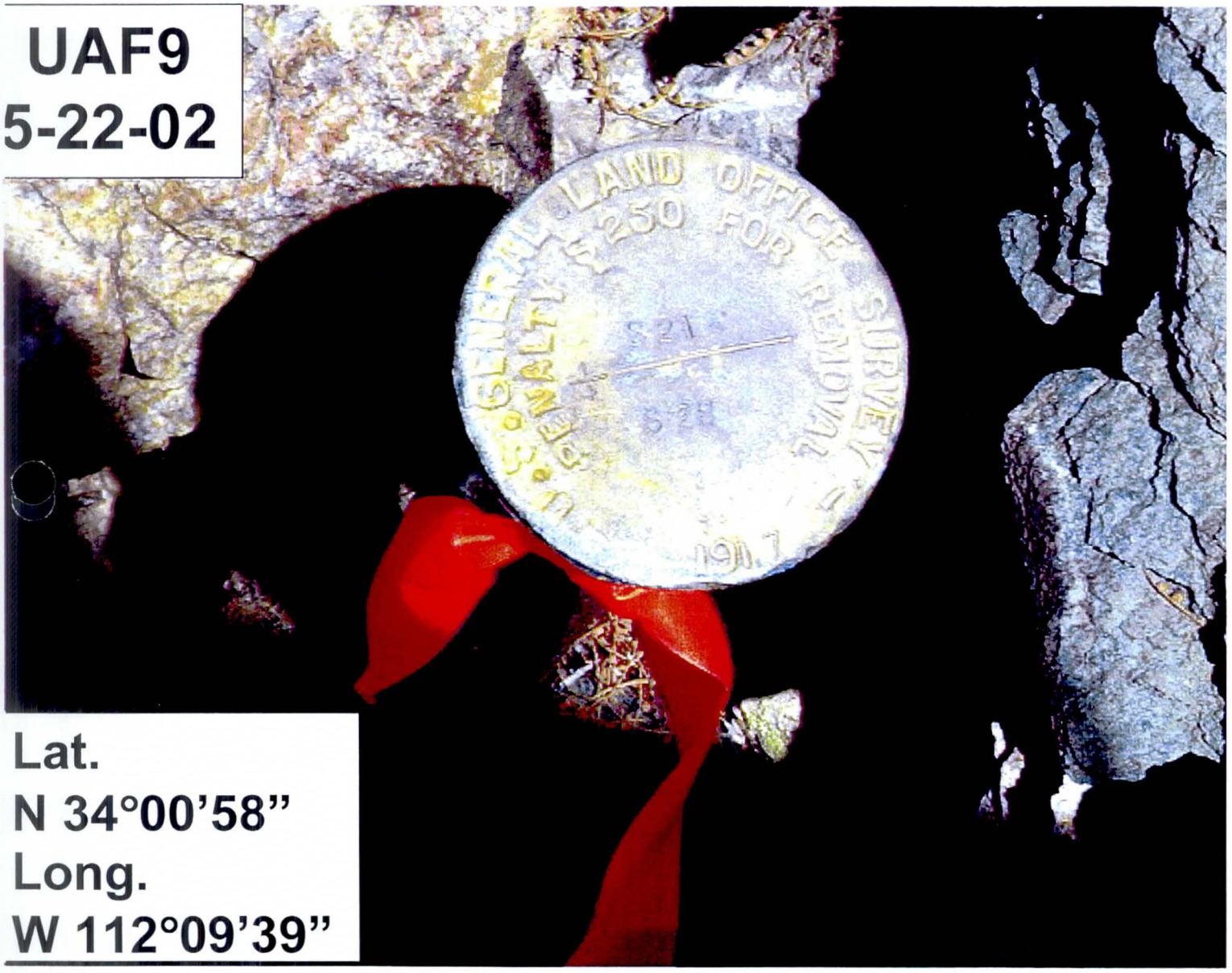

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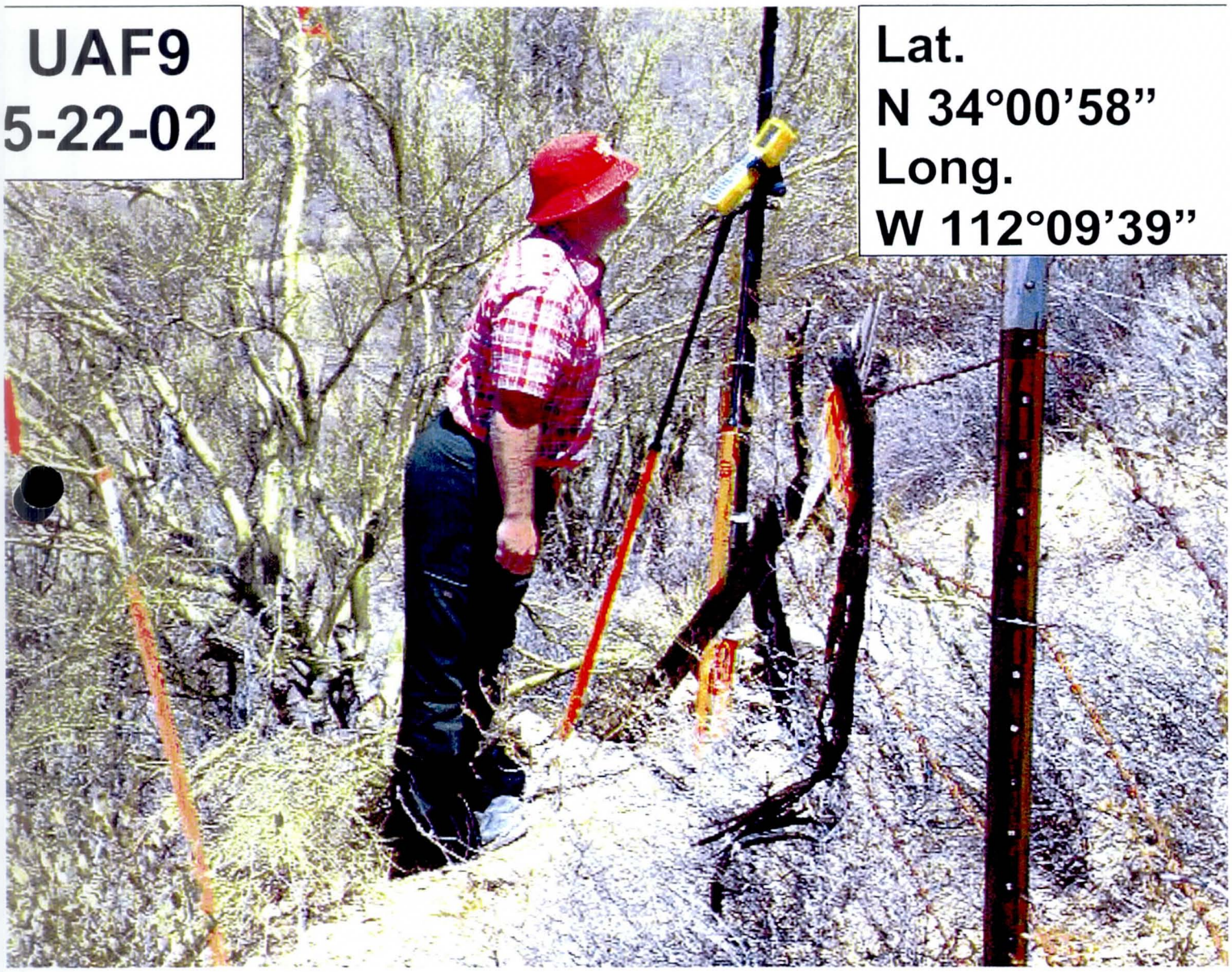
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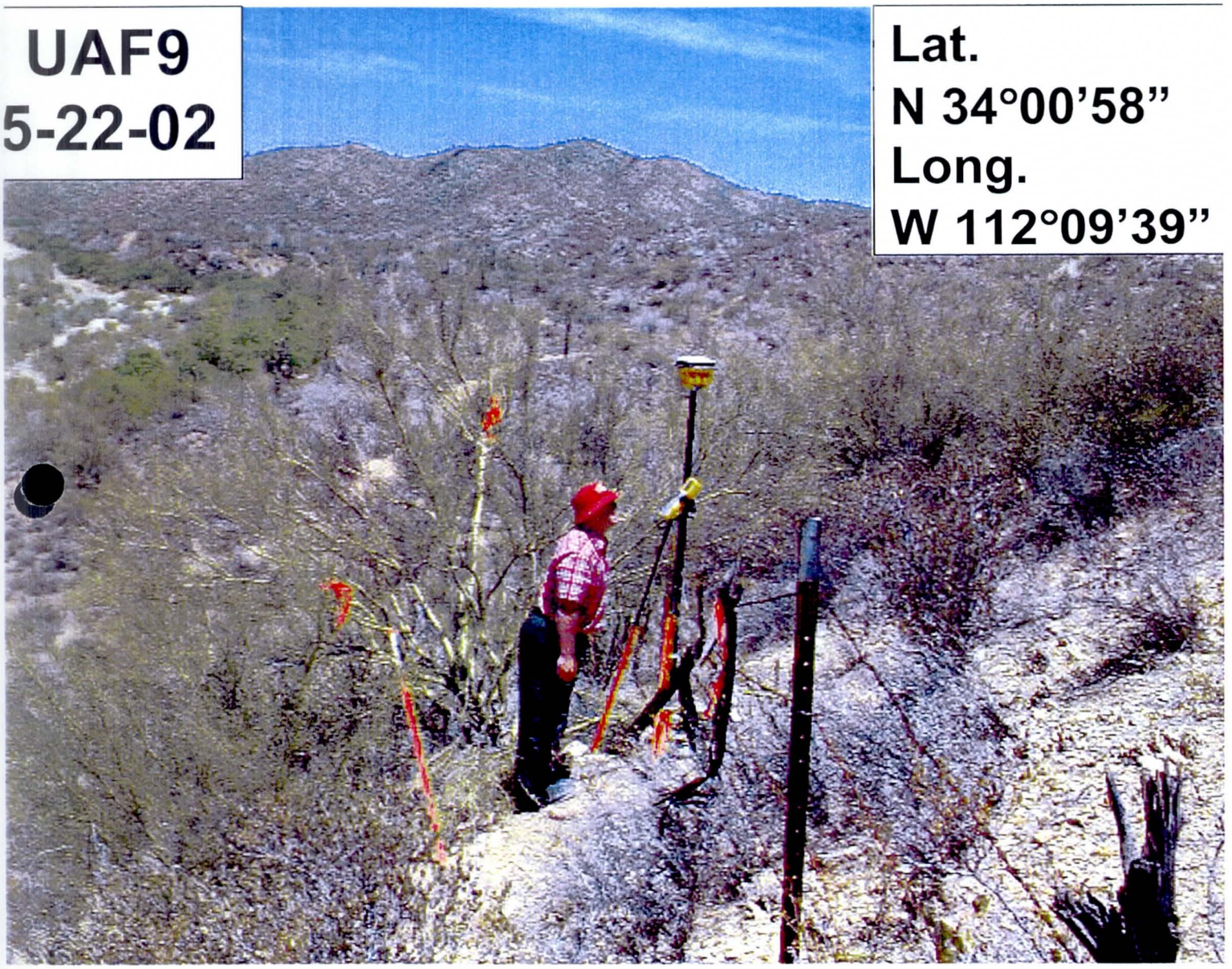
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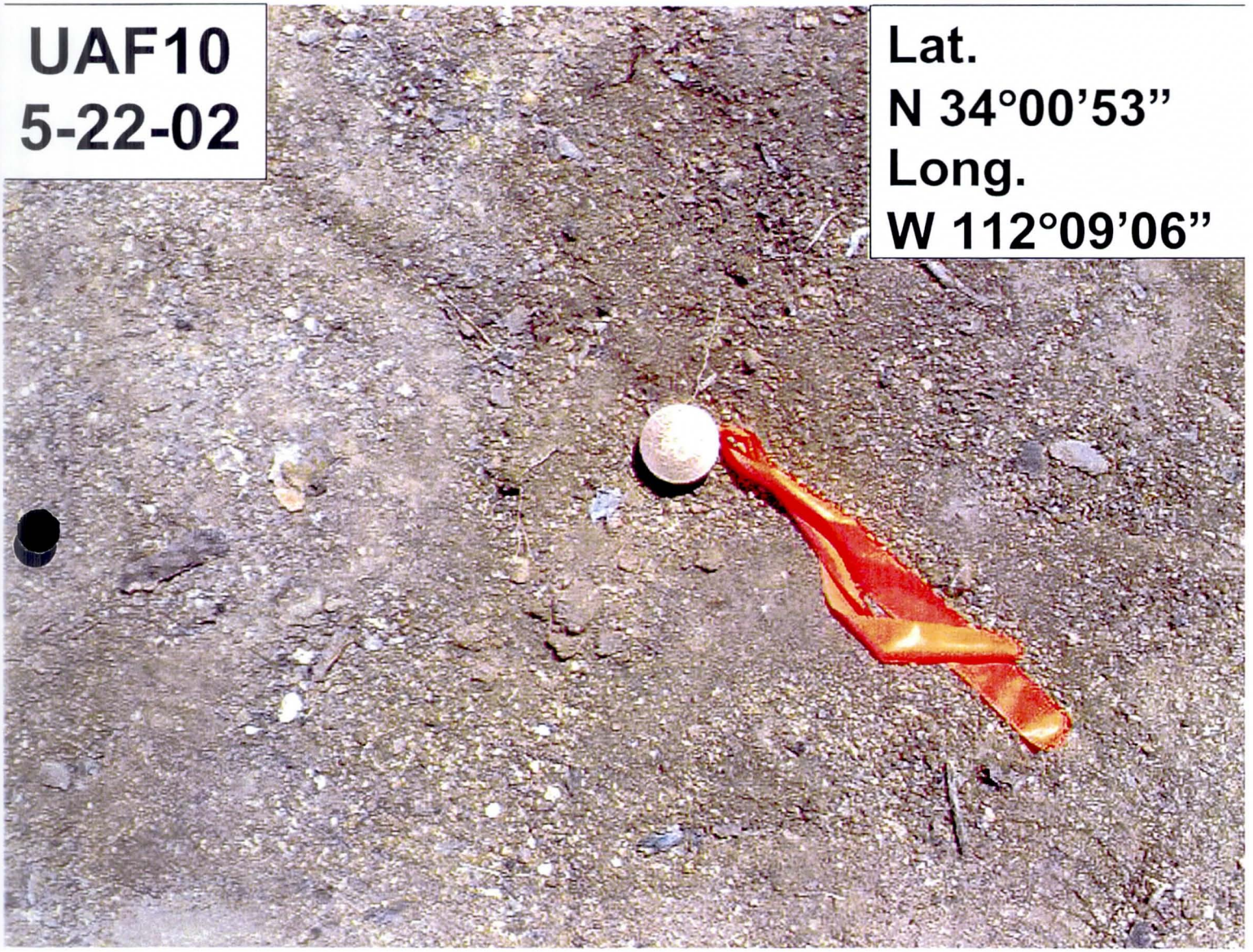
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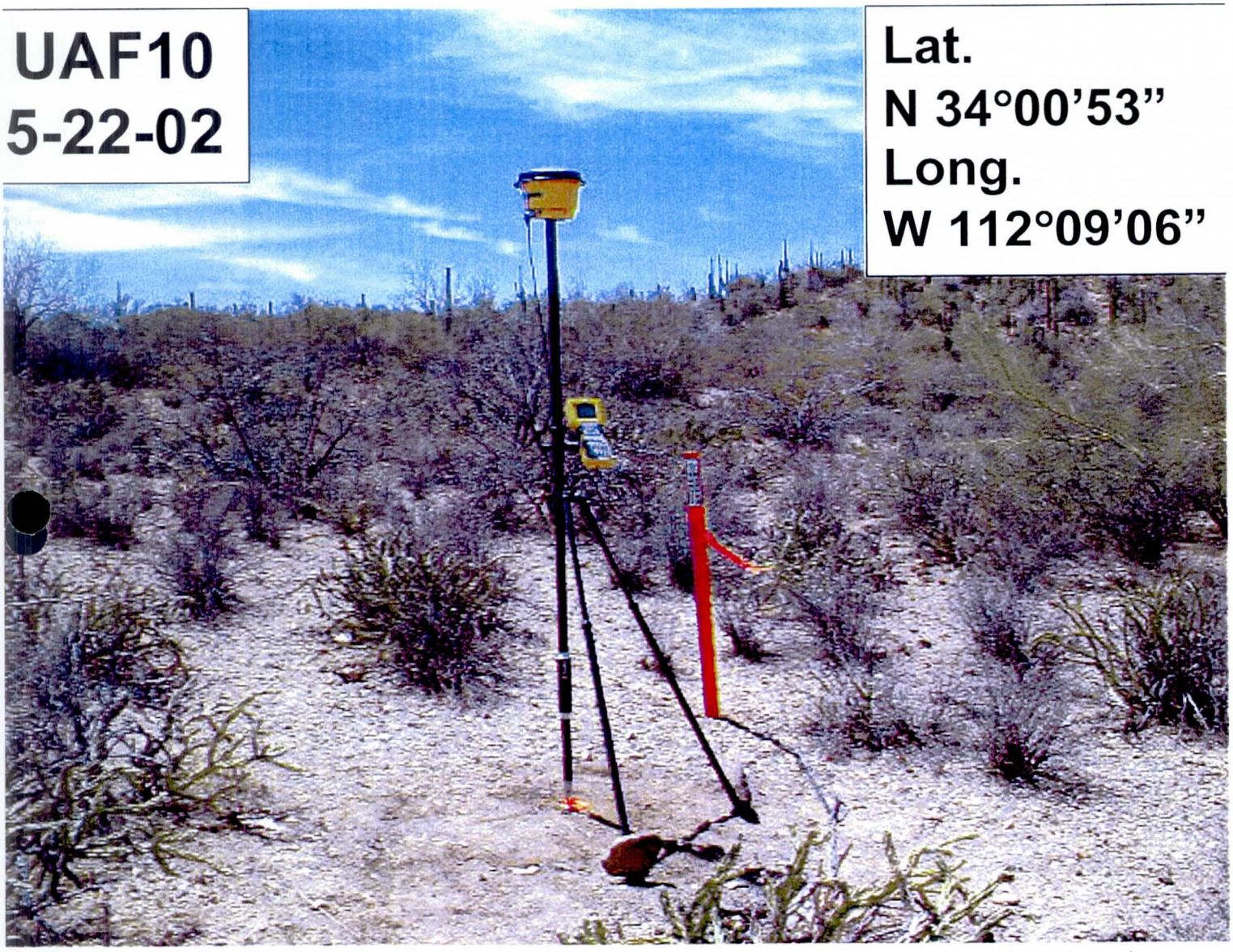
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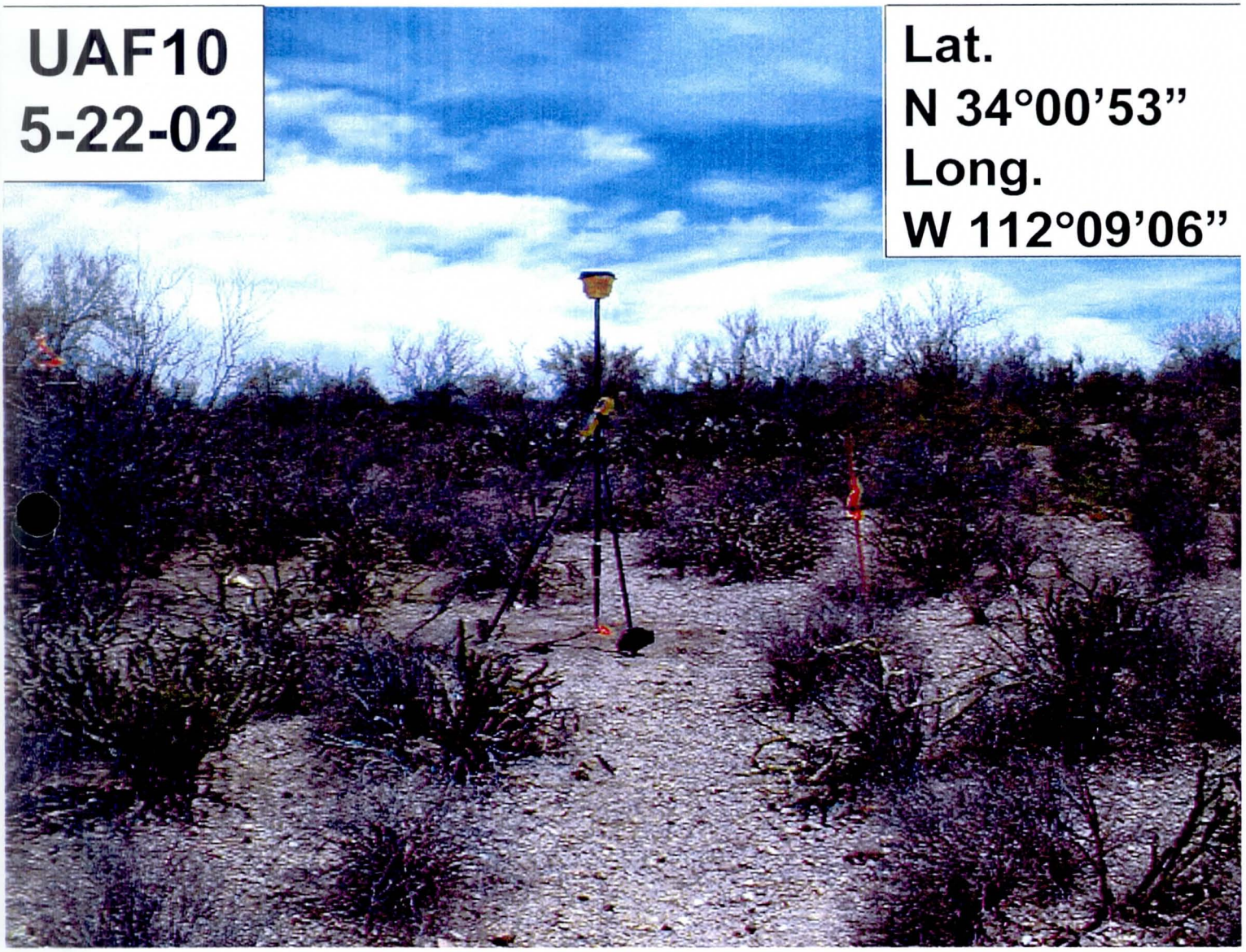
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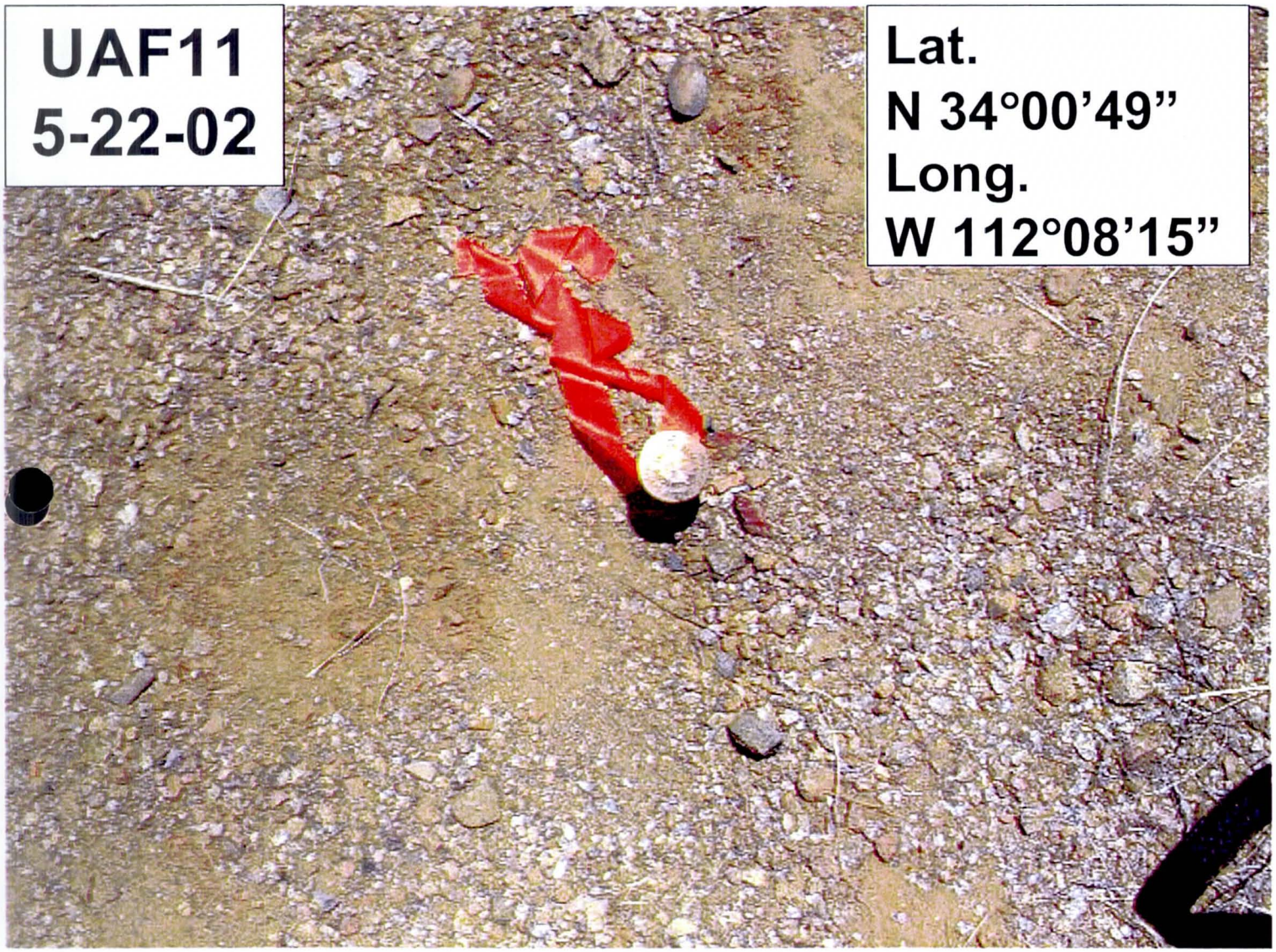
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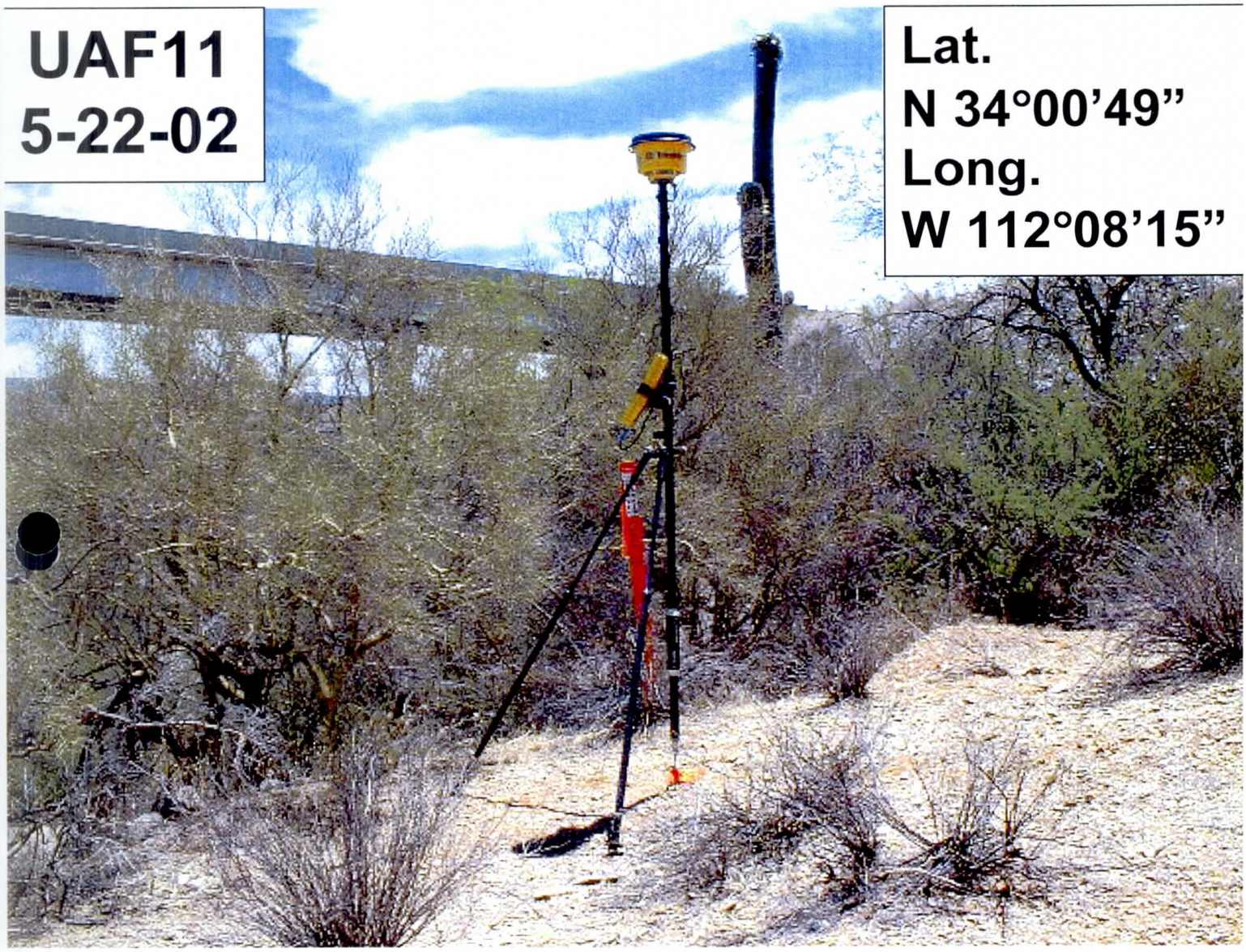
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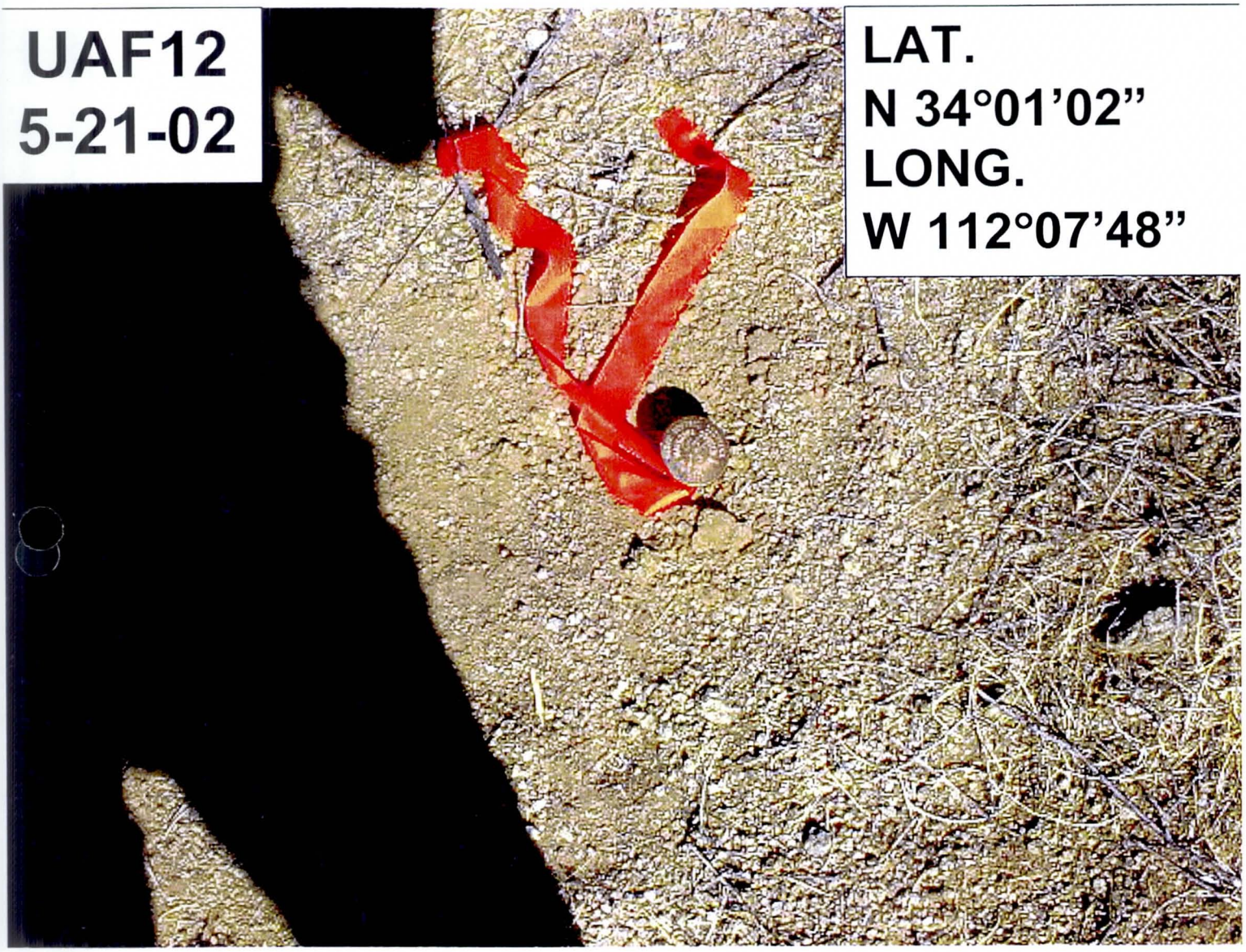

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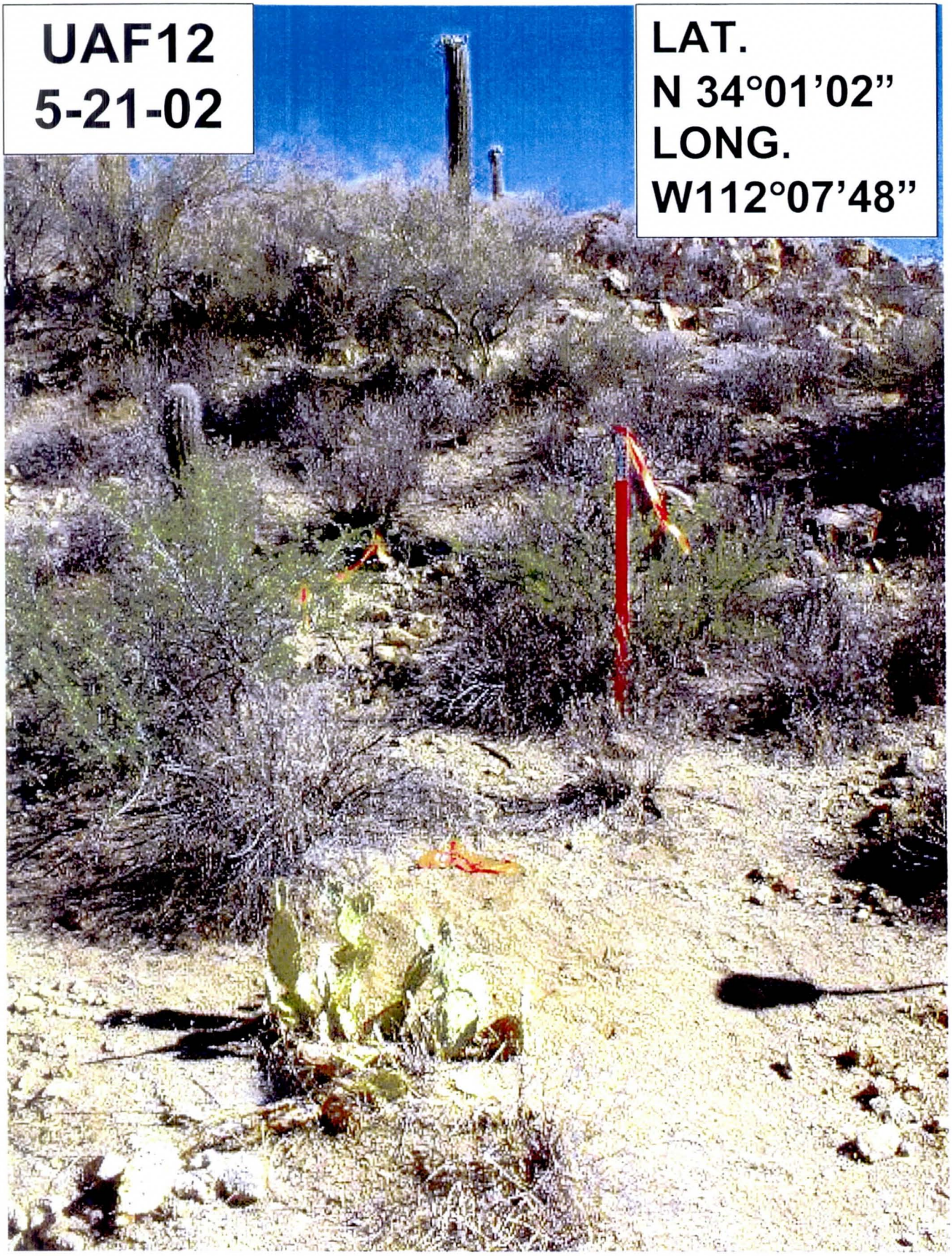
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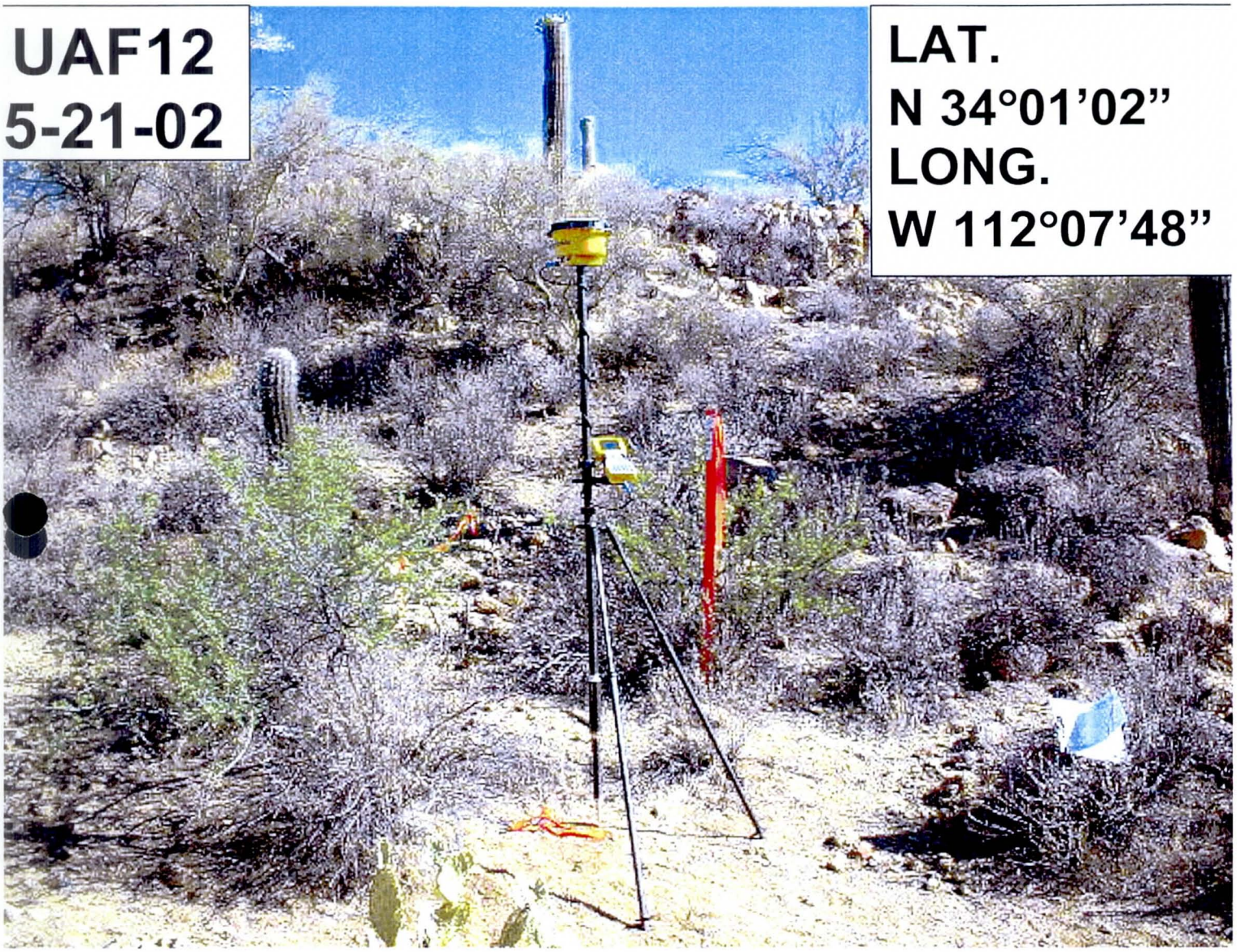
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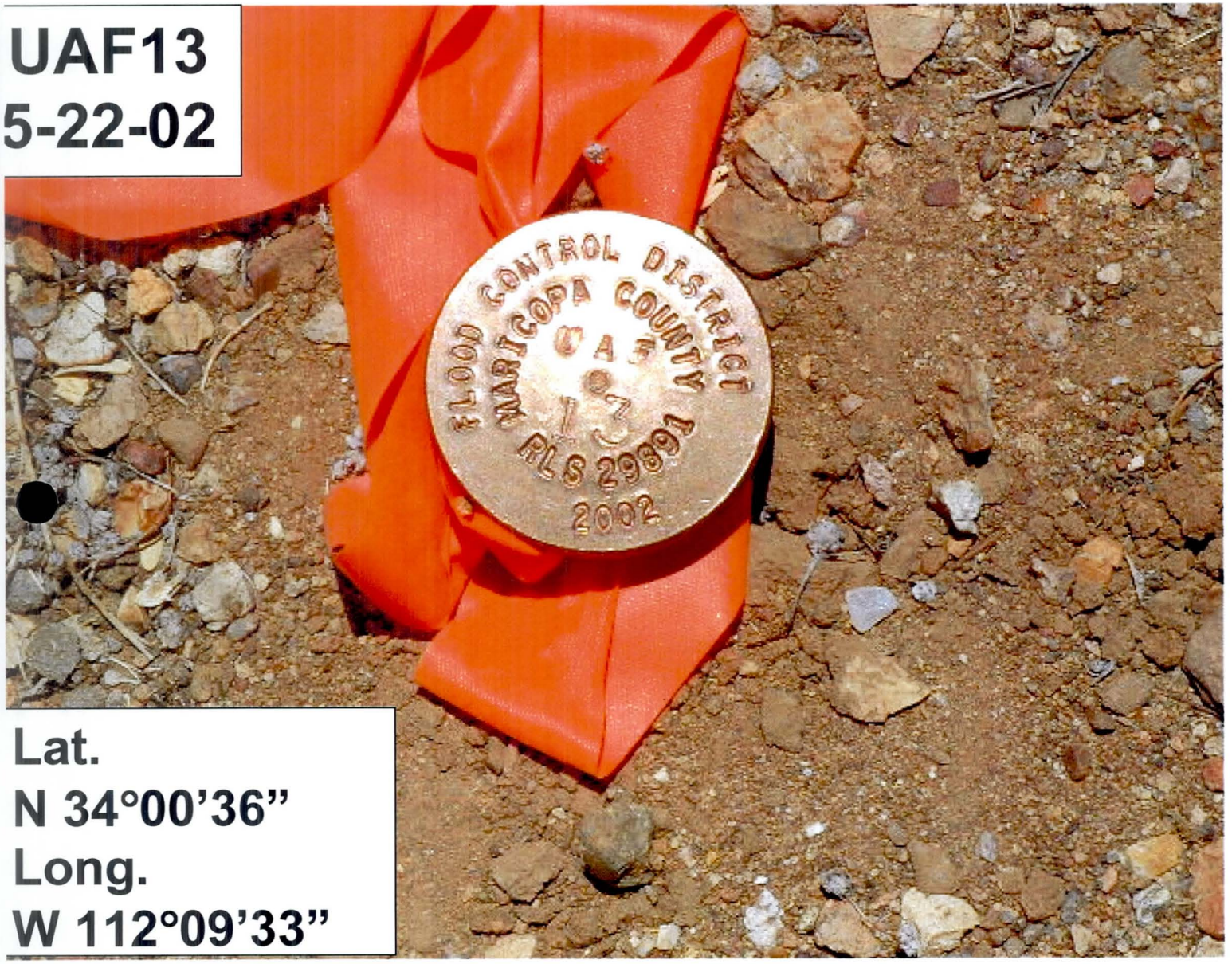
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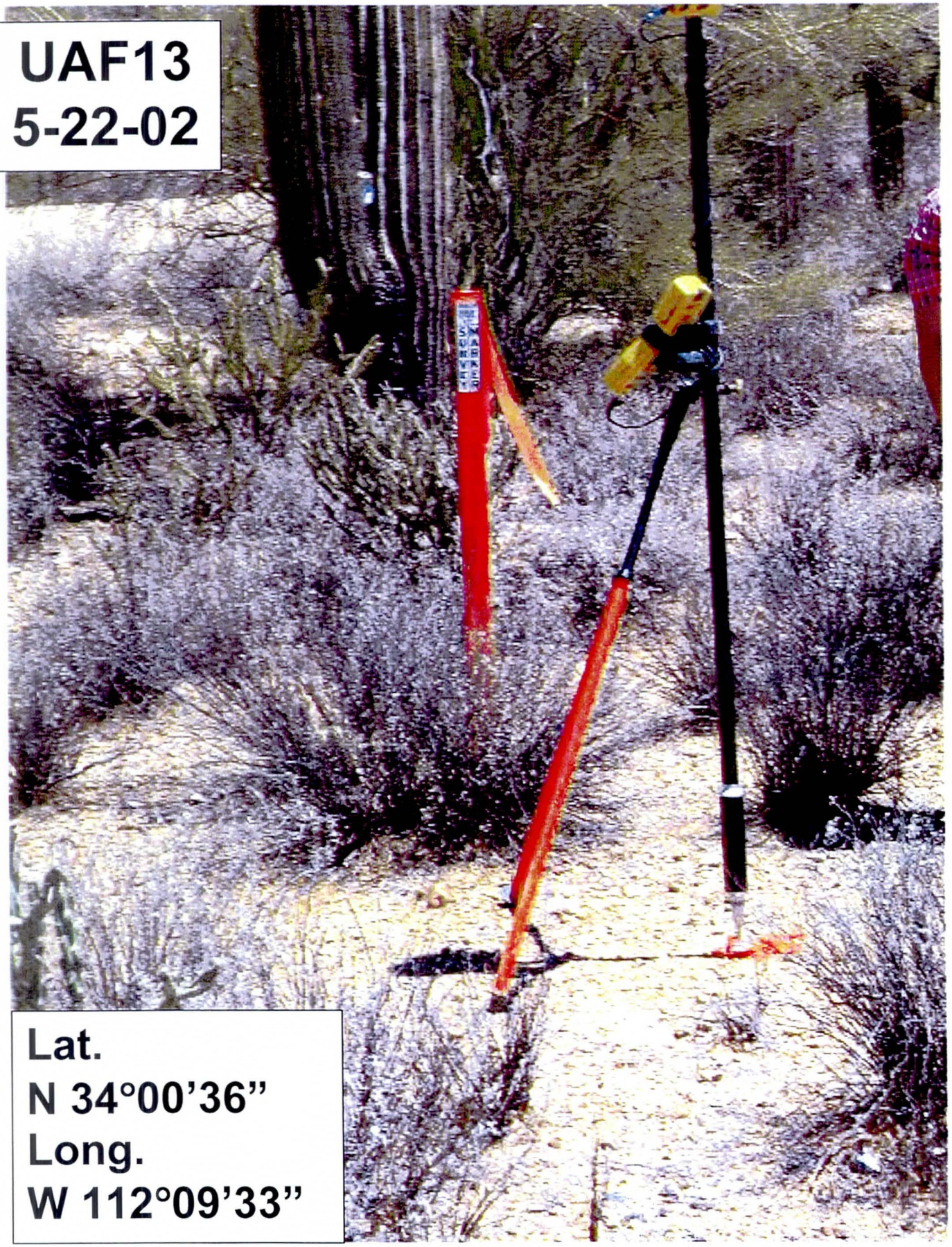
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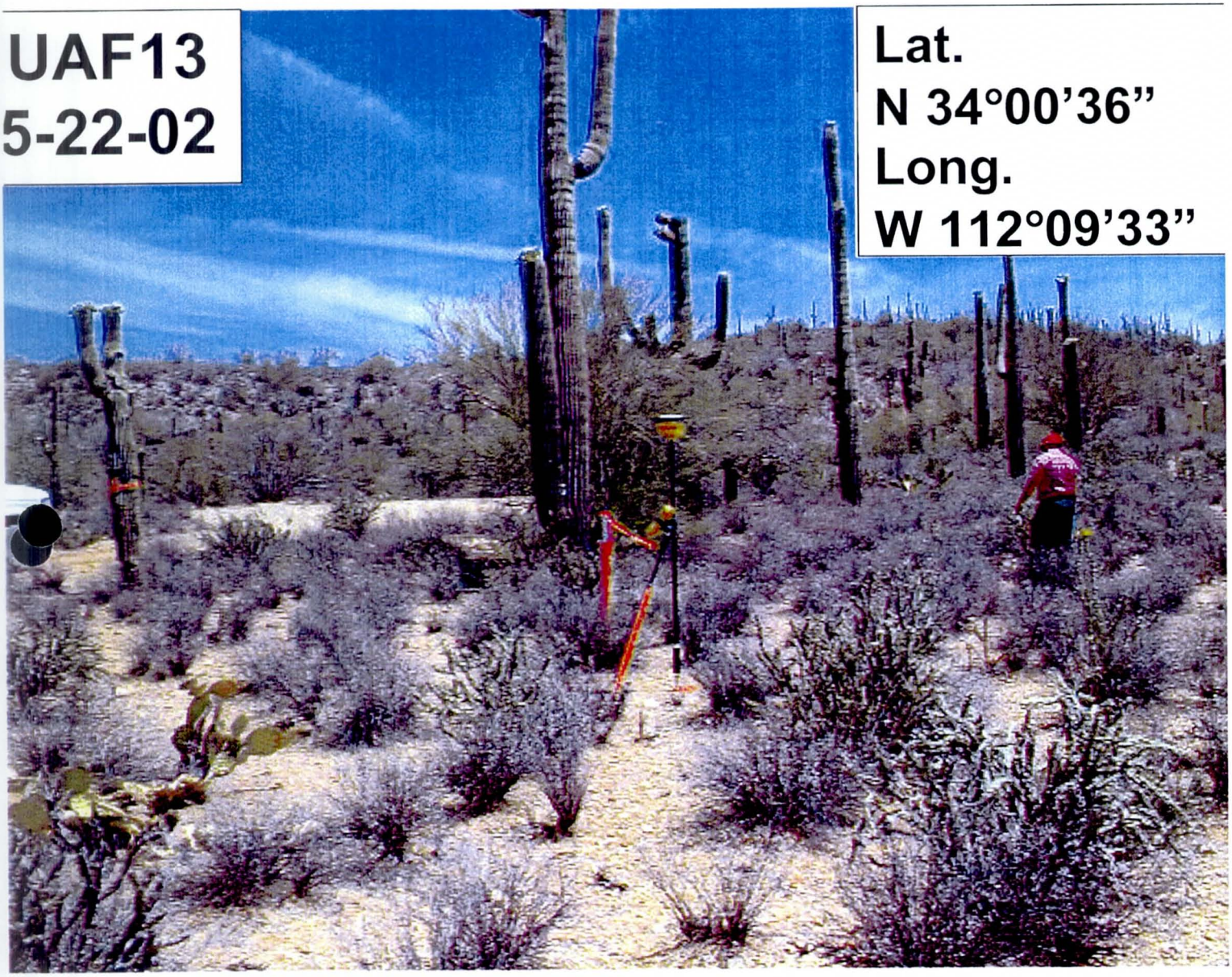
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5-22-02
Lat.
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Long.
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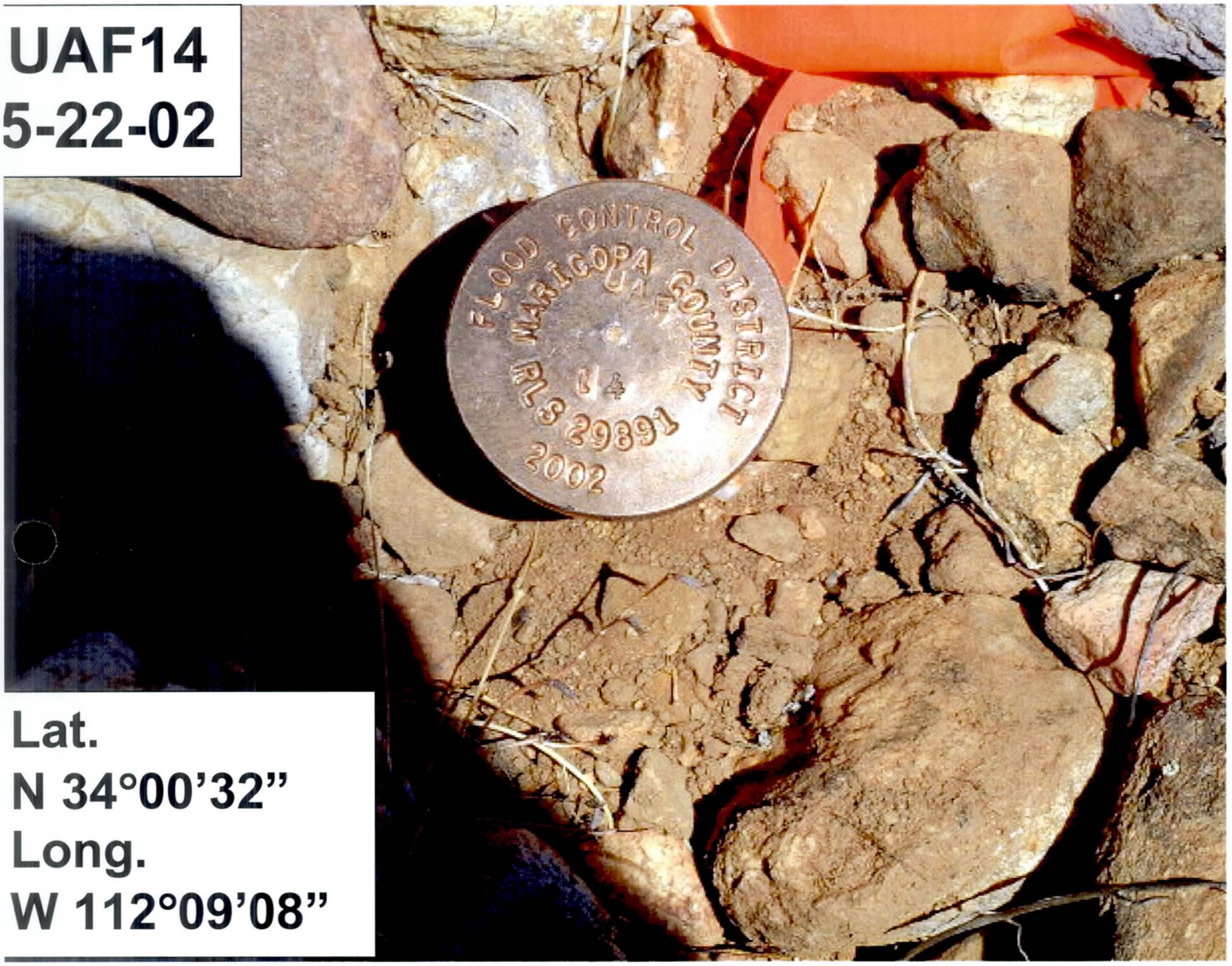

UAF14
5-22-02

Lat.
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Long.
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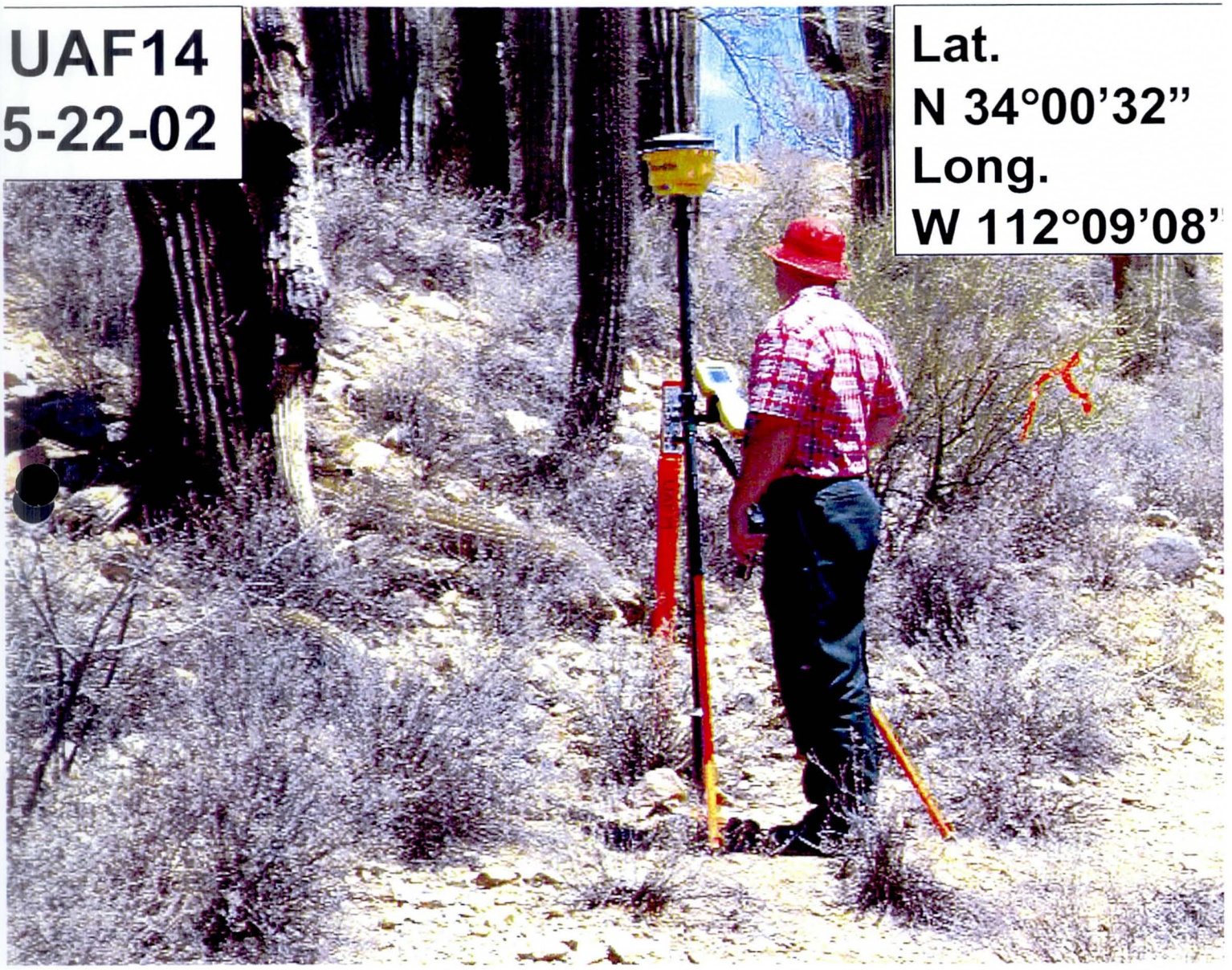
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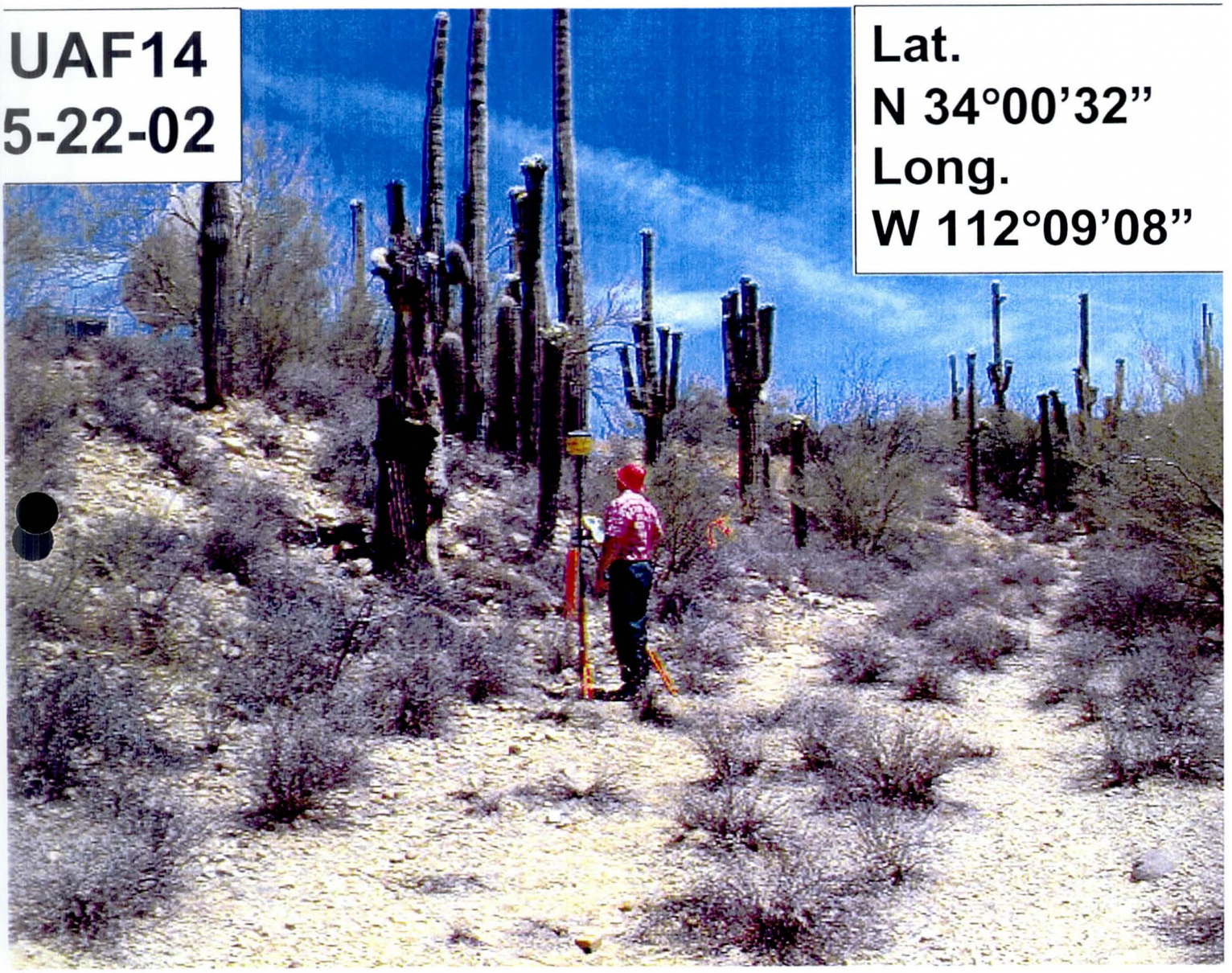
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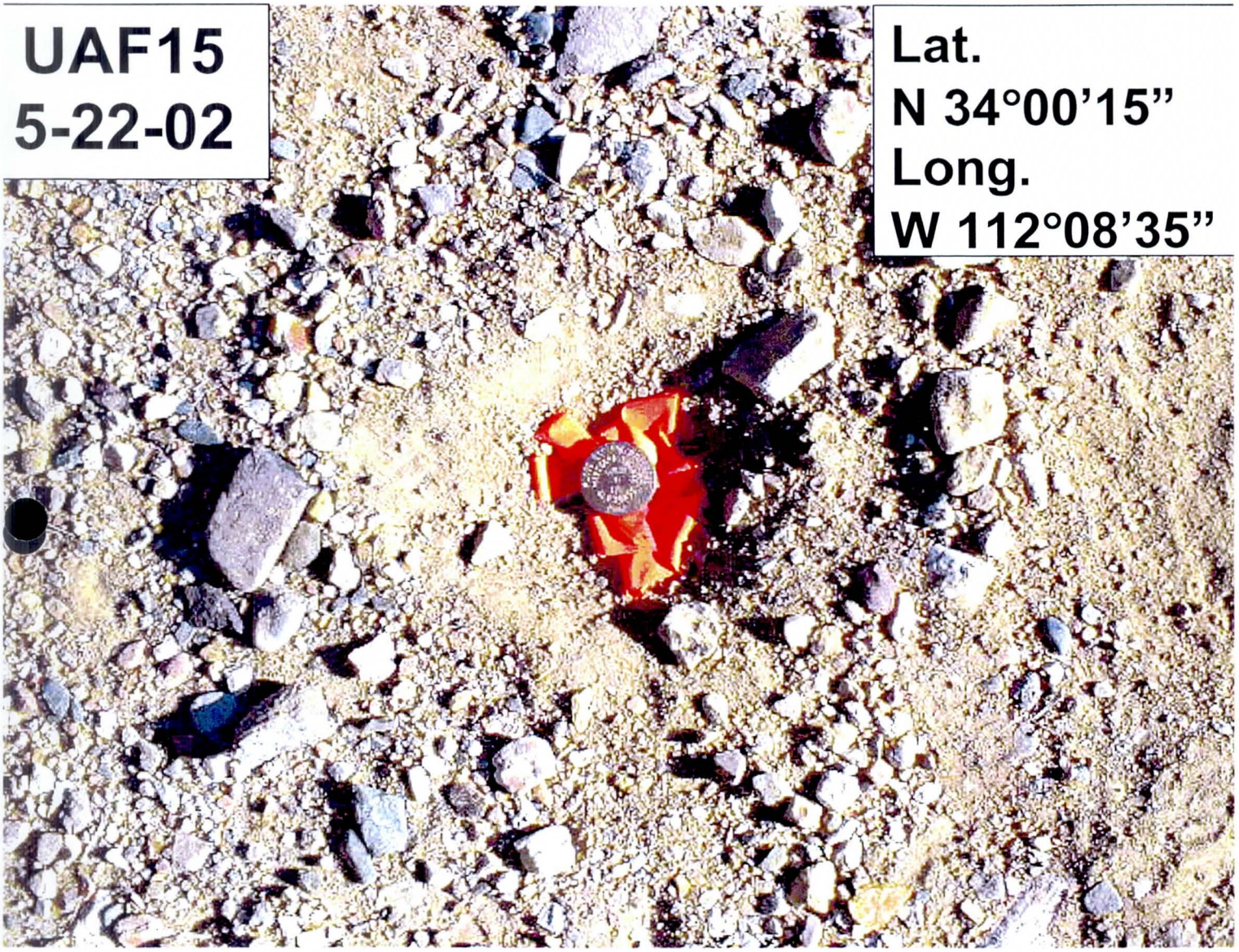
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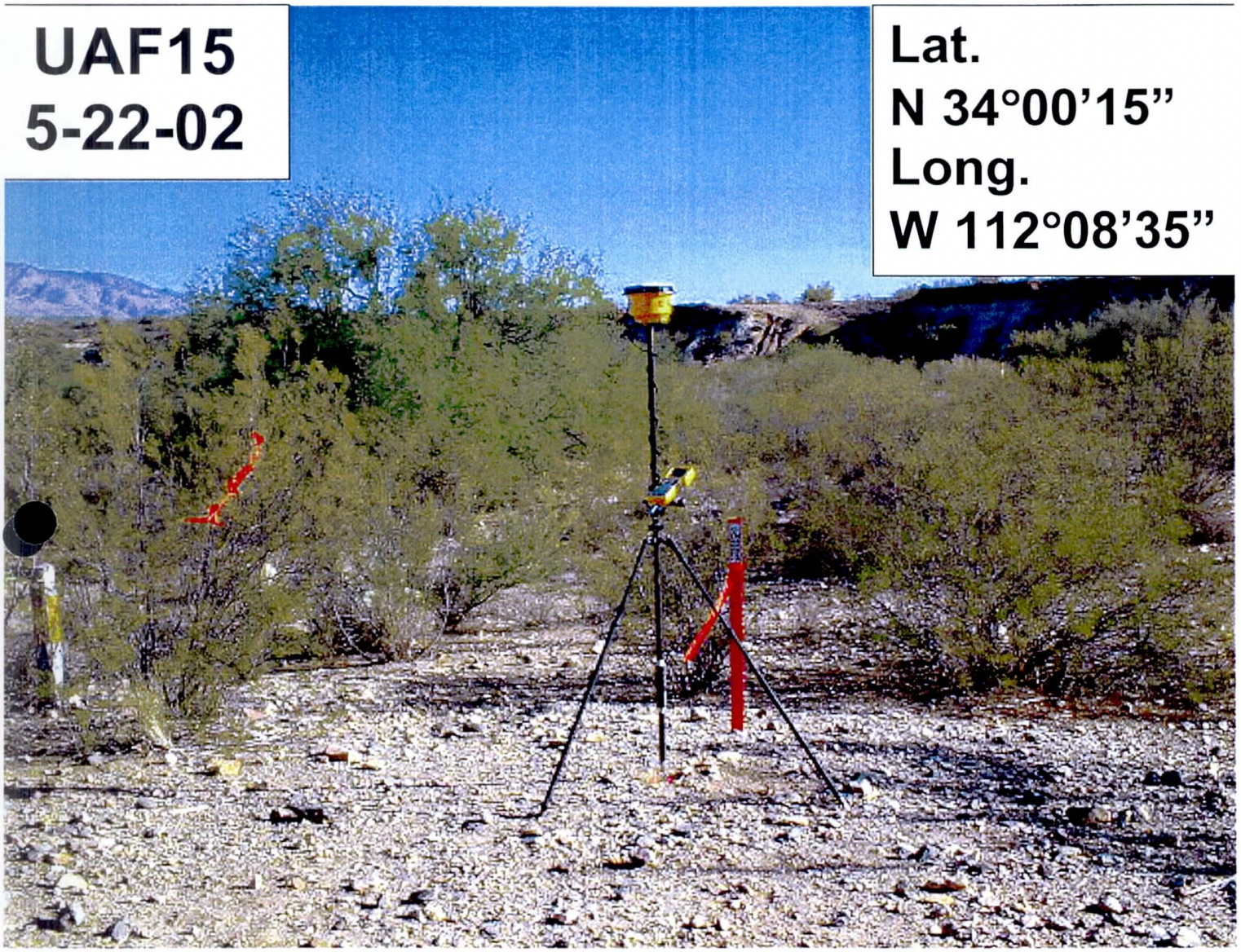
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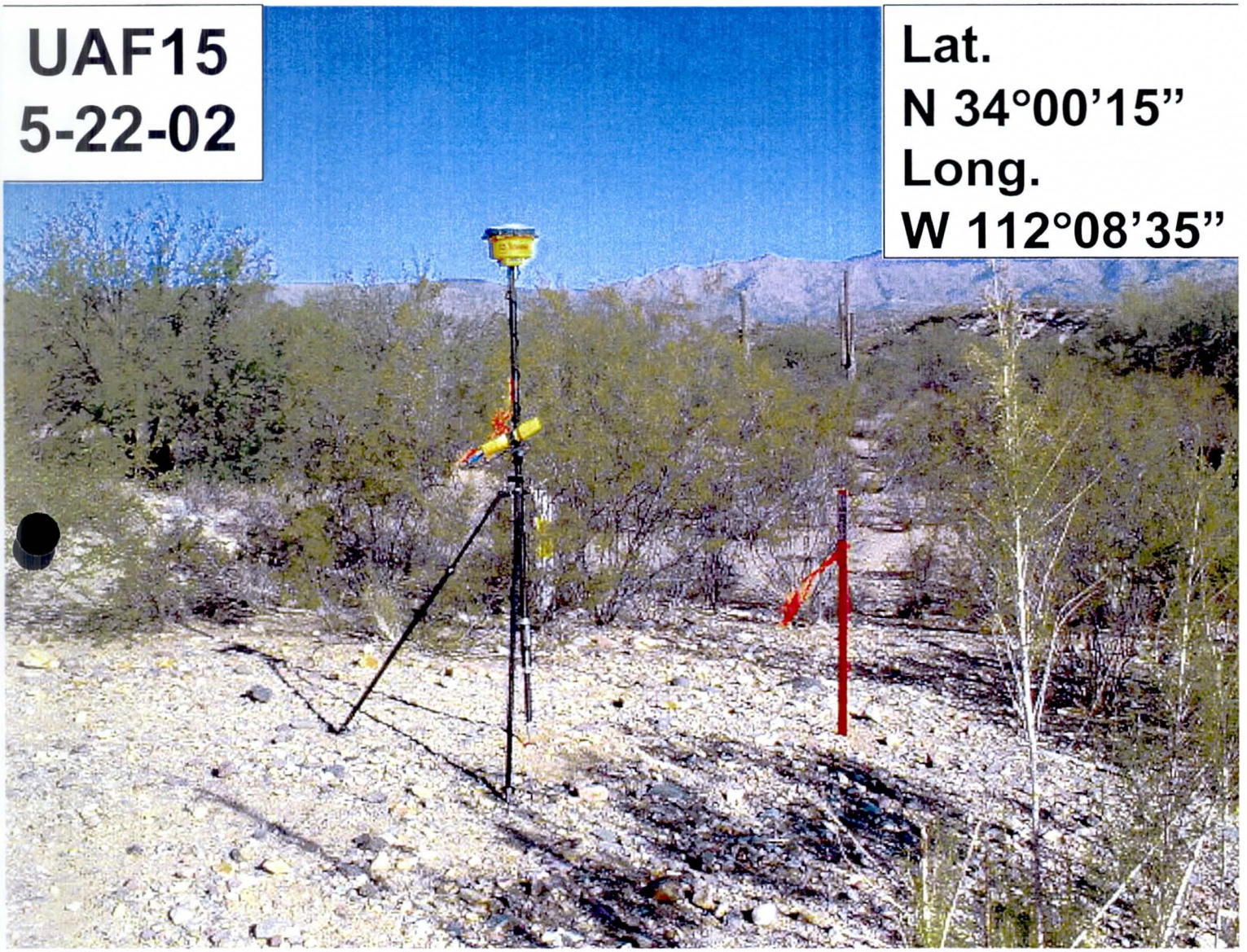
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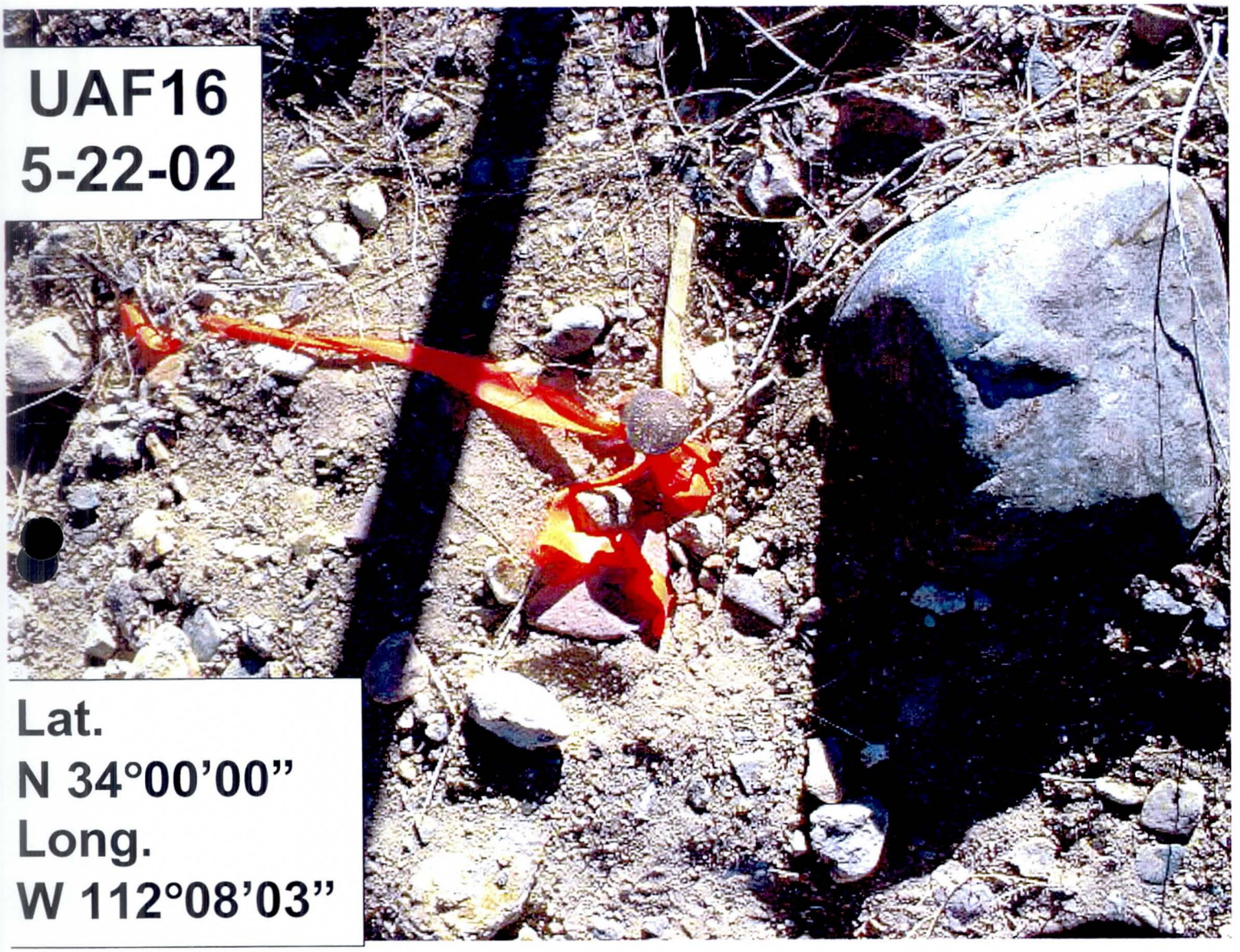
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Long.
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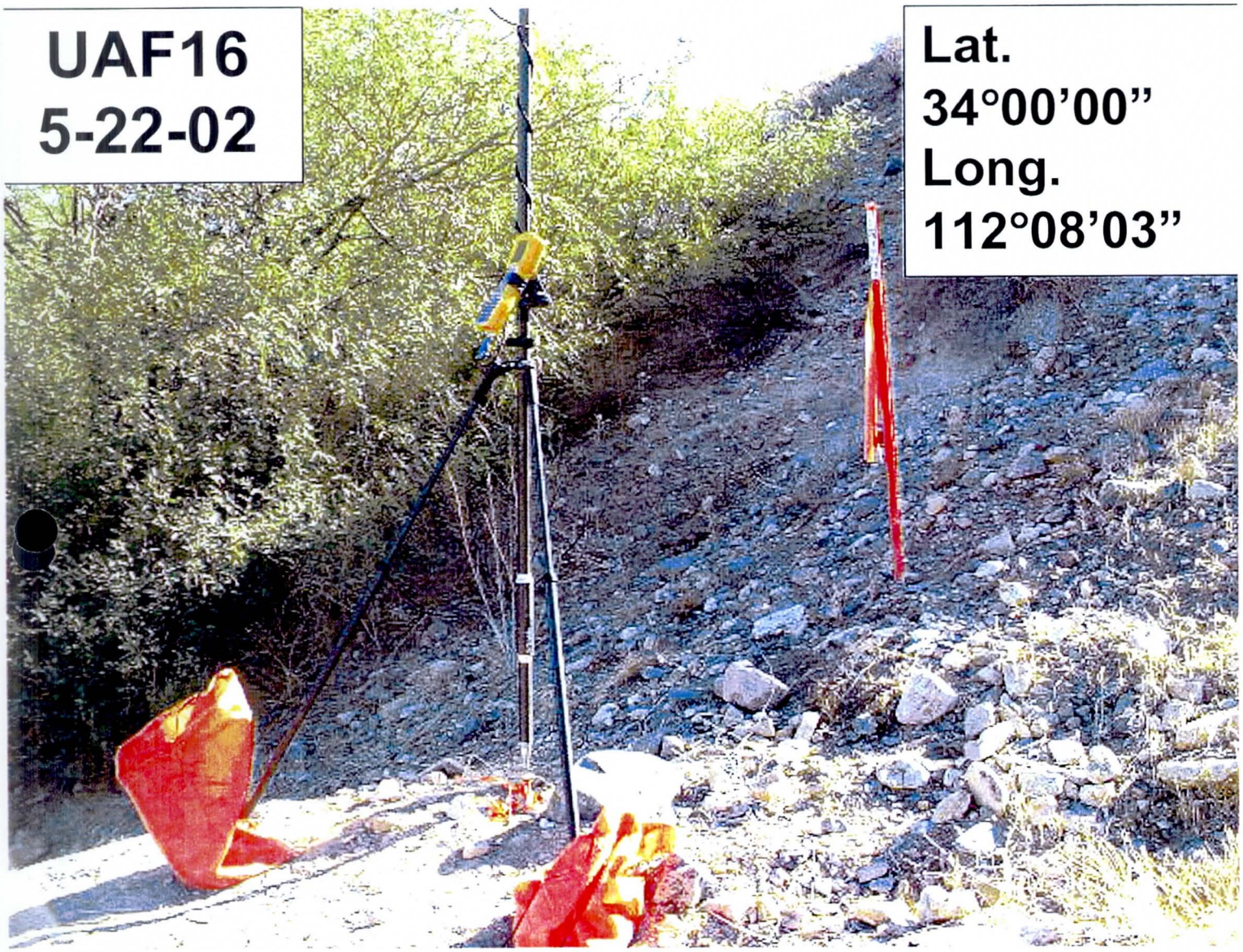
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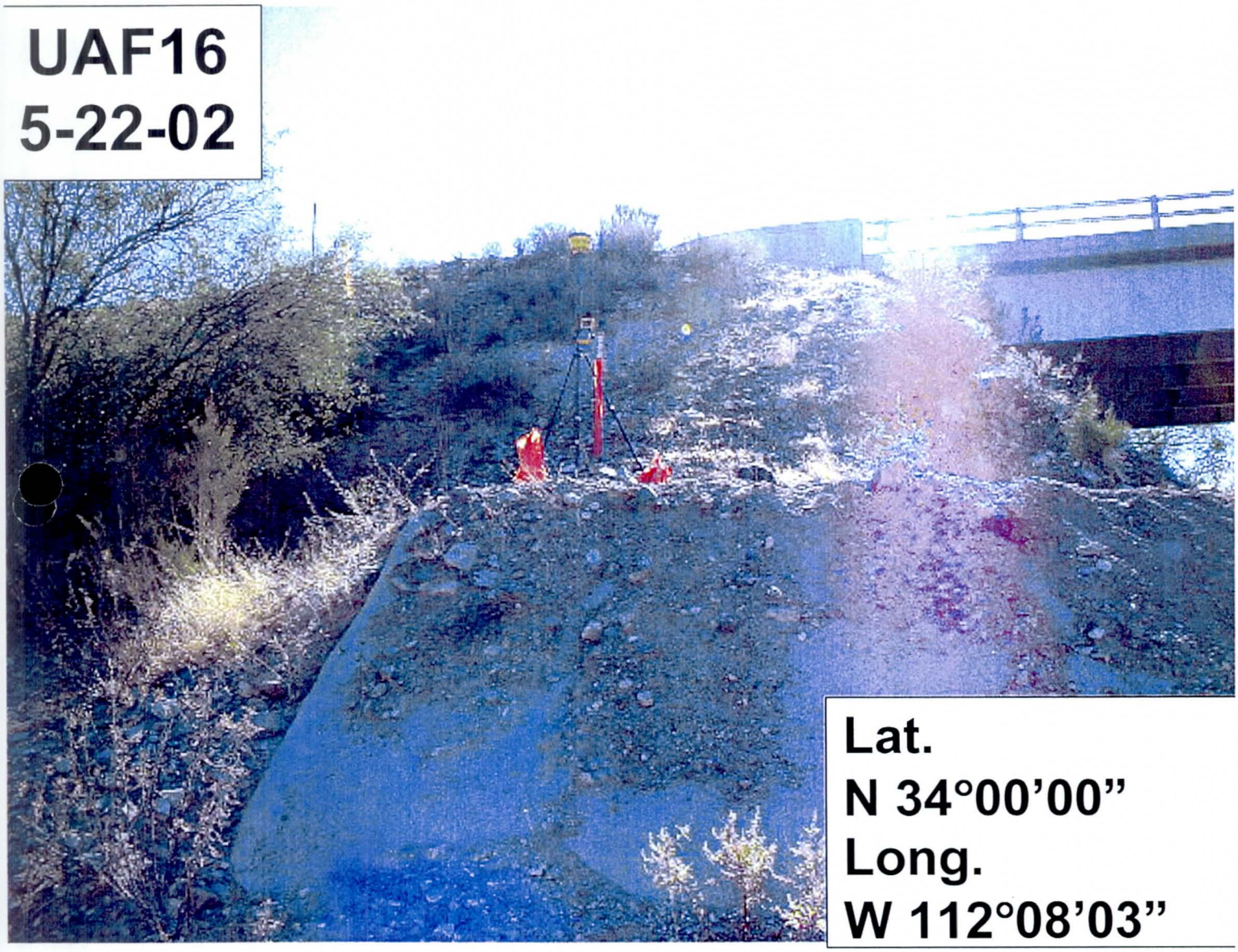
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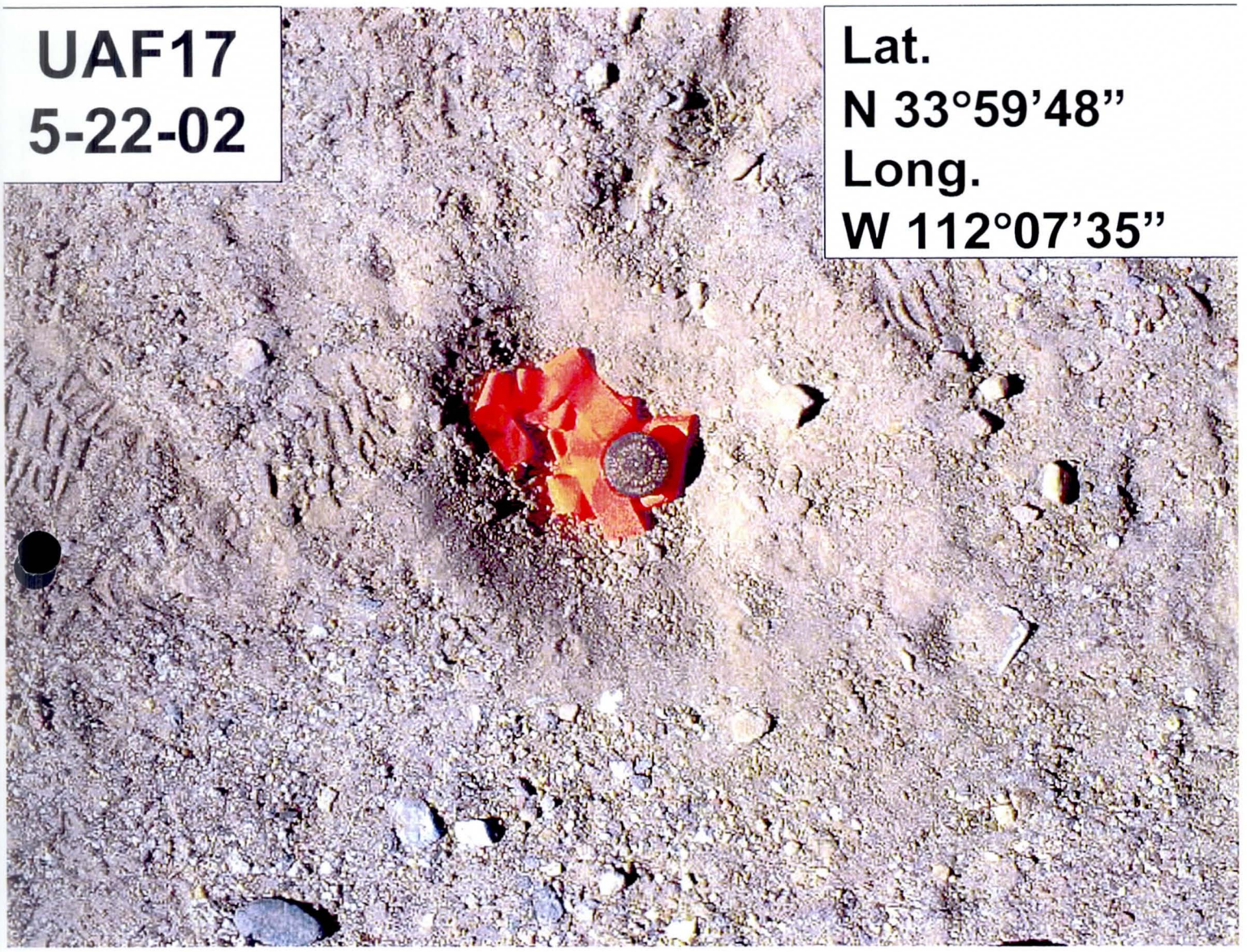
UAF17
5-22-02



Lat.
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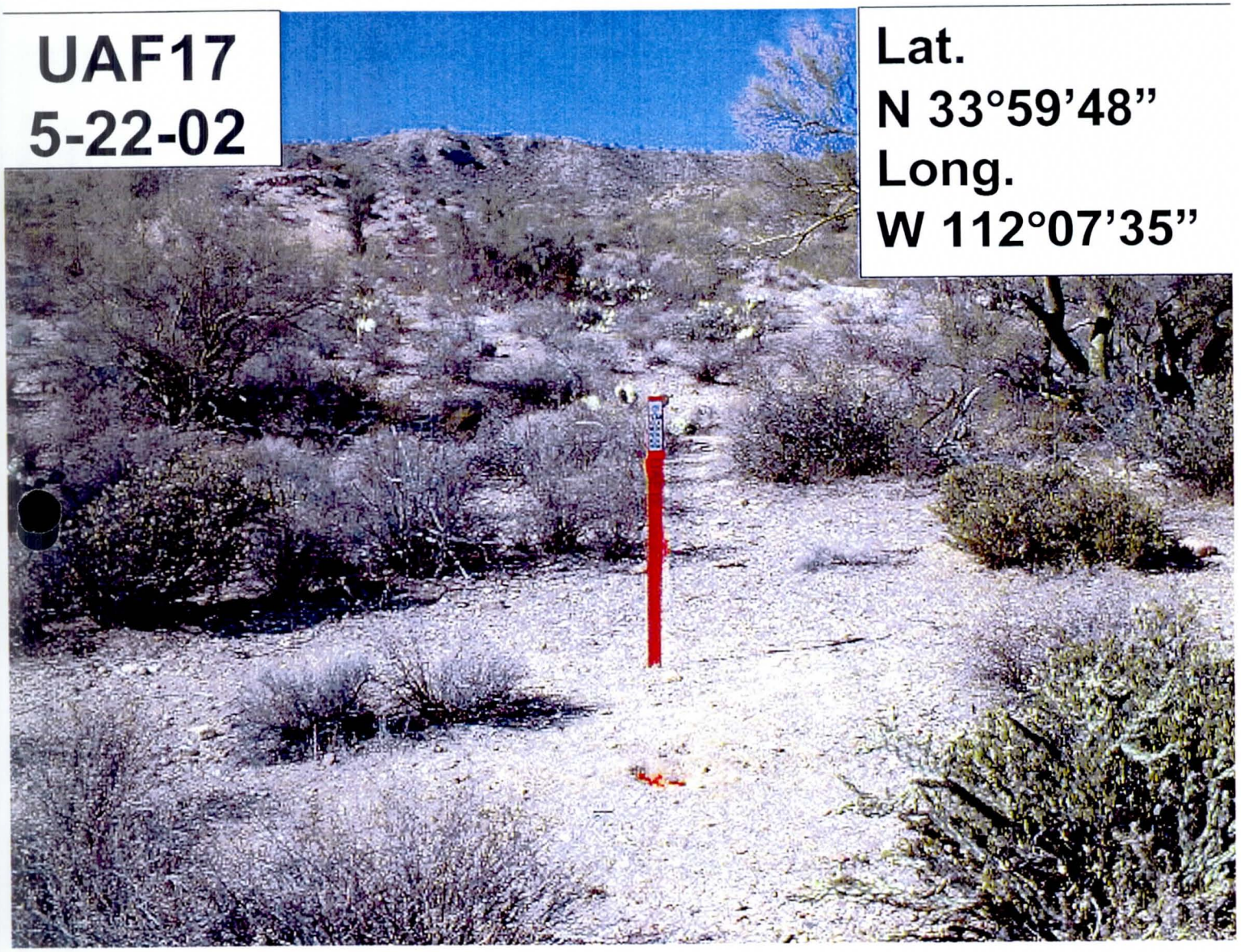
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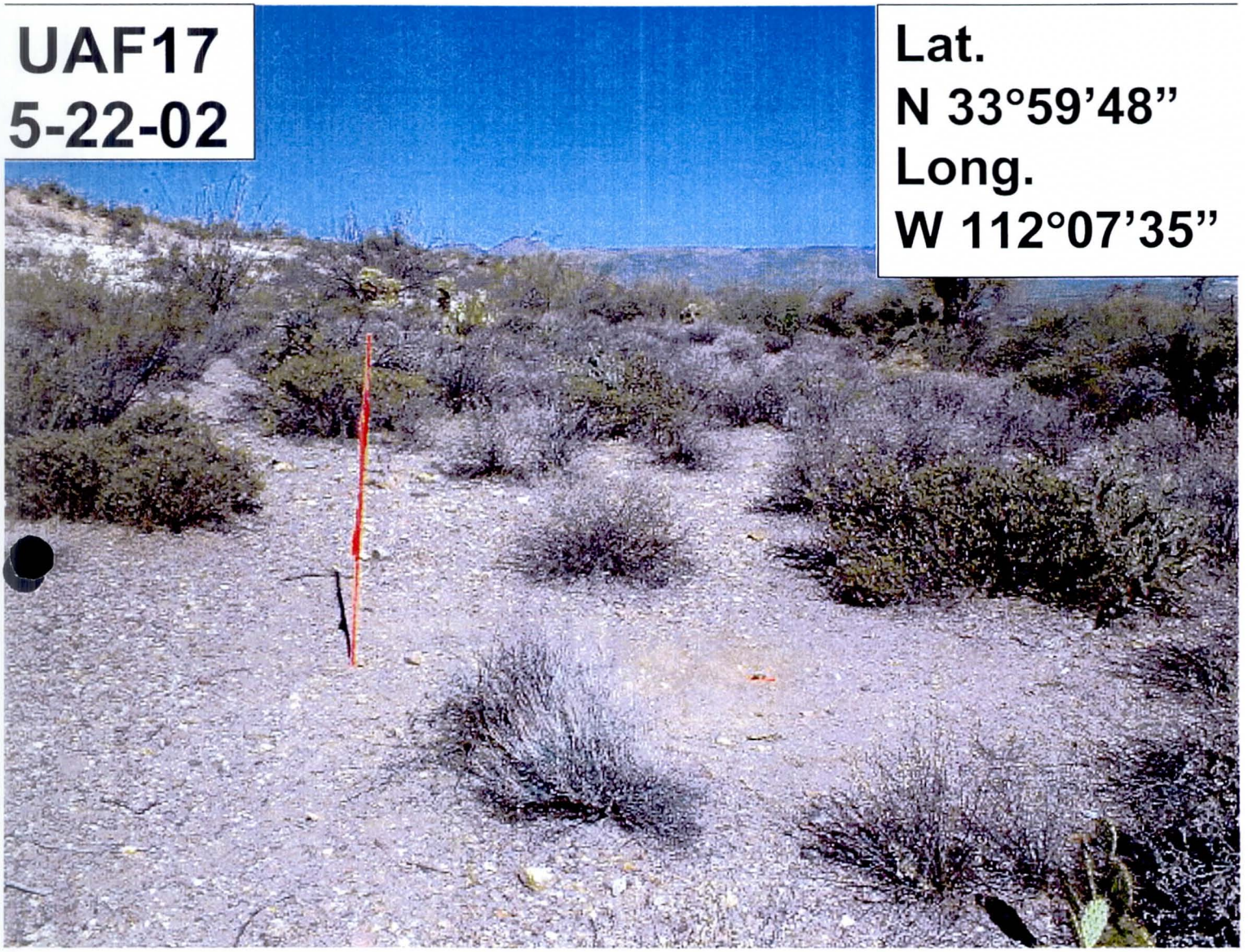
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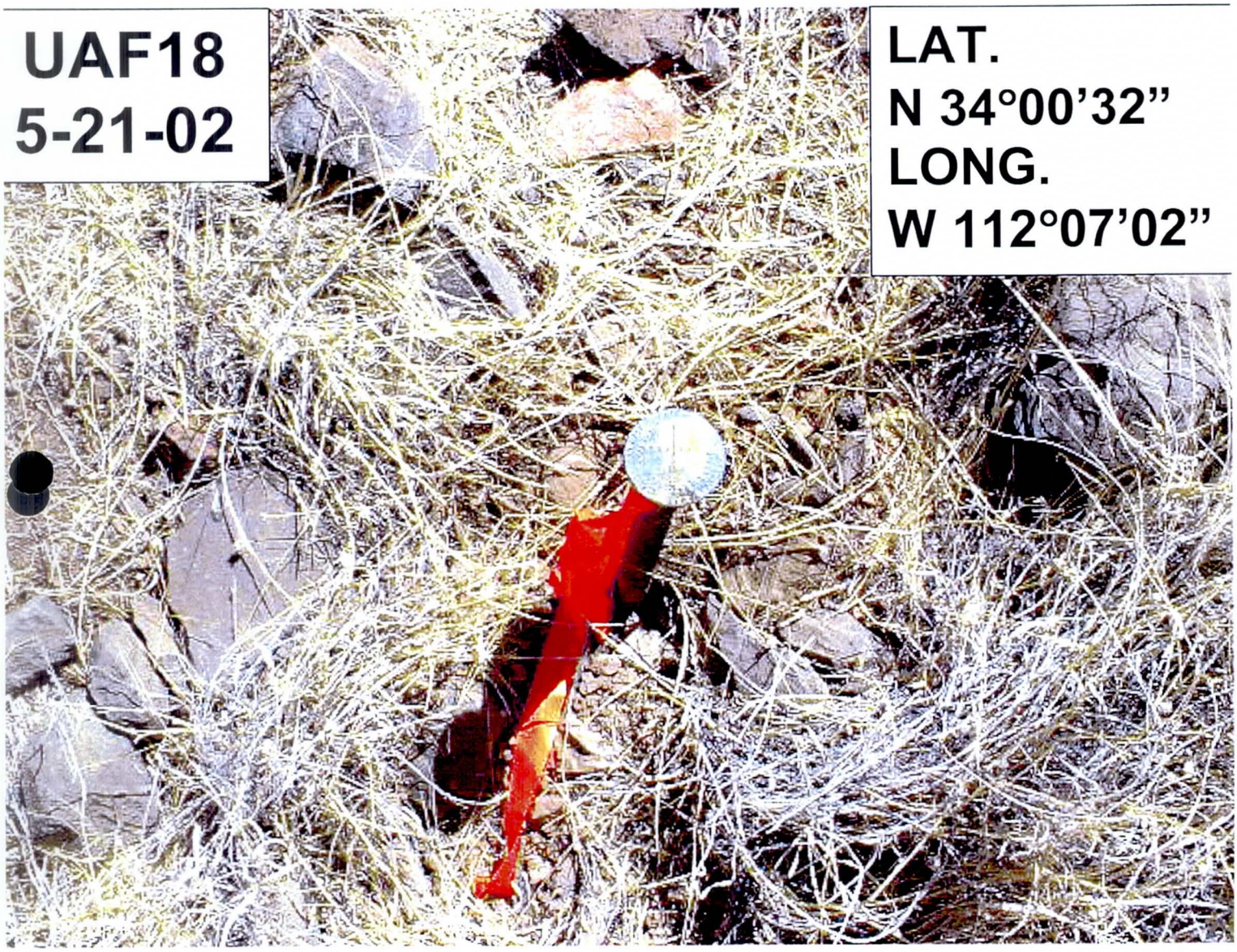
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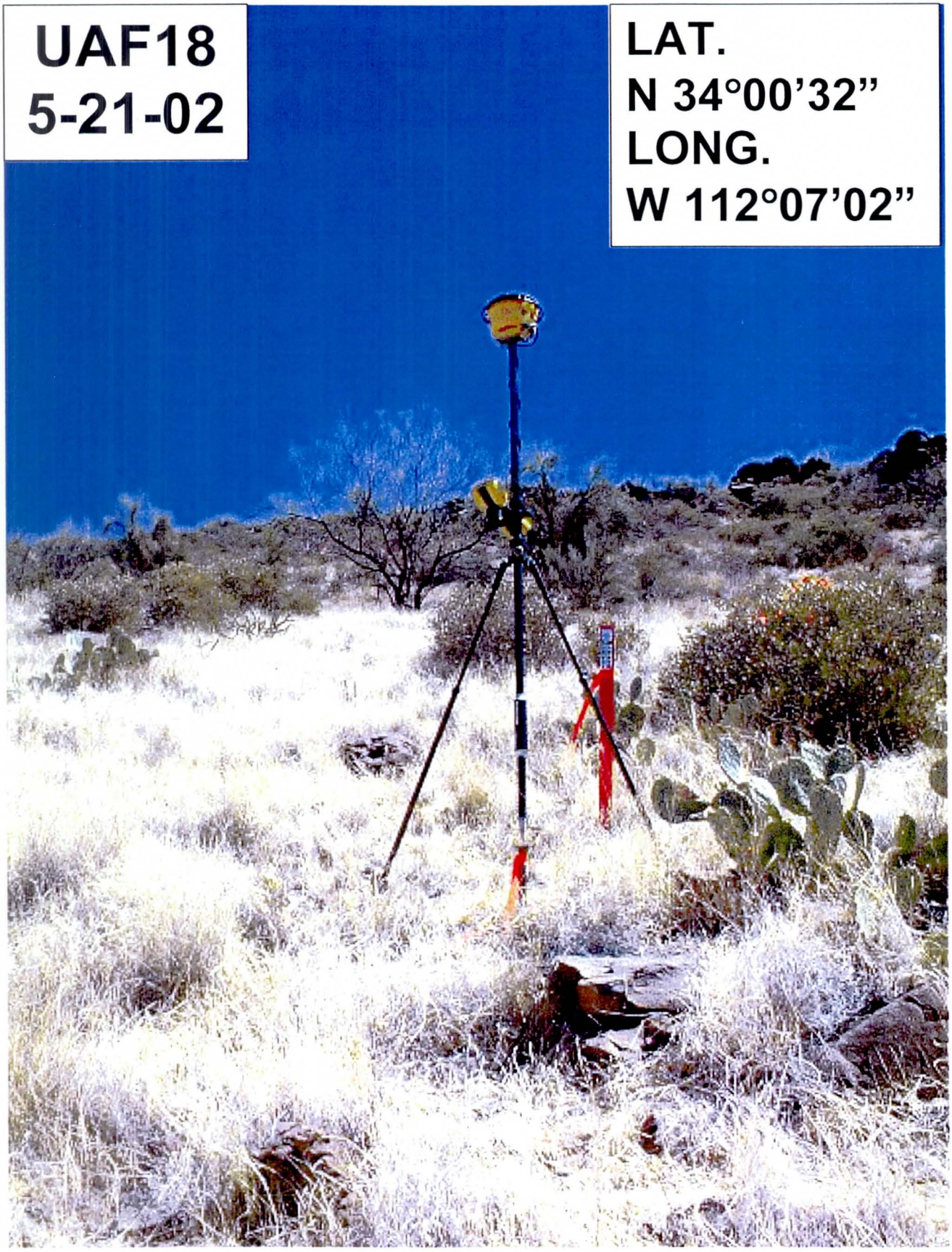
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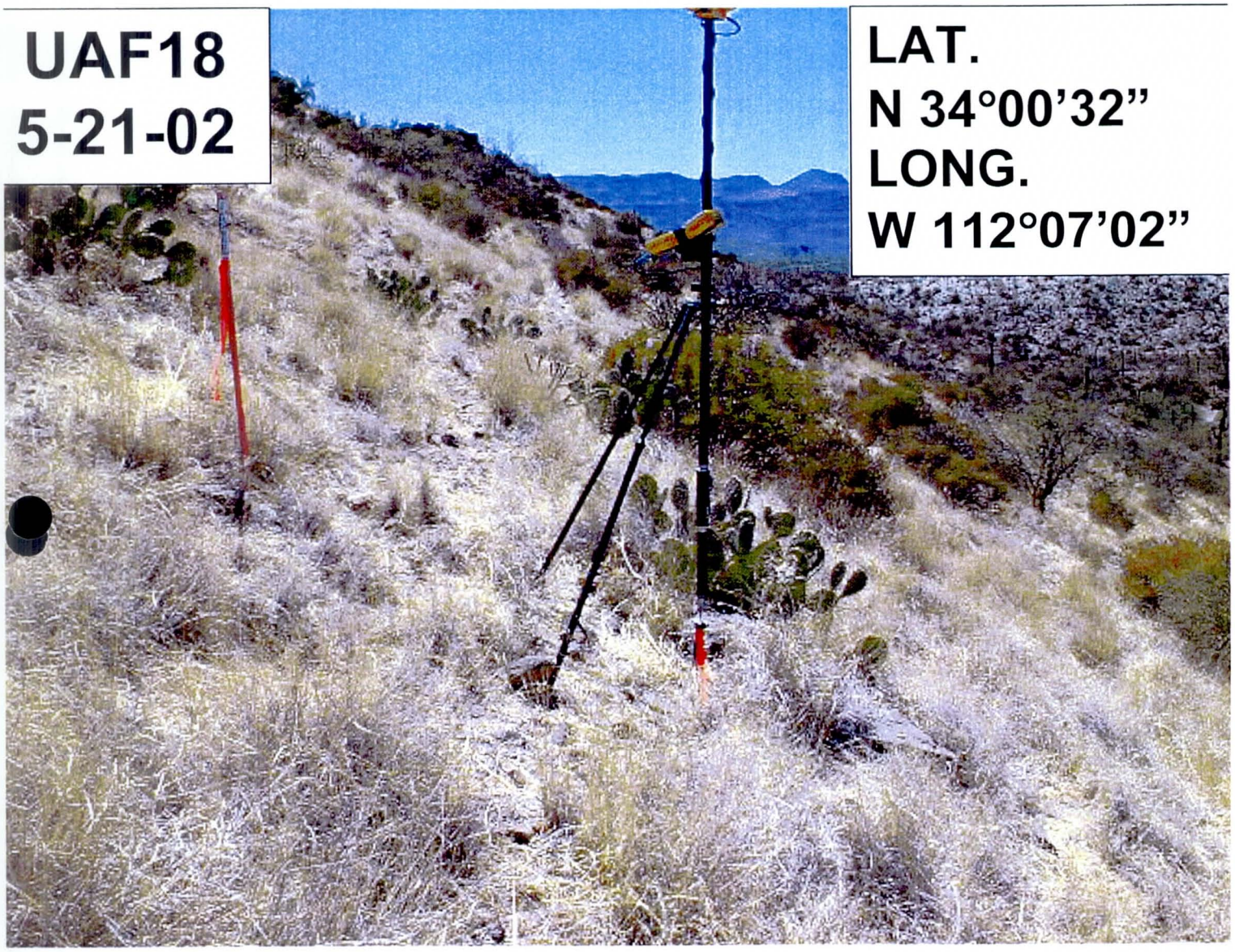
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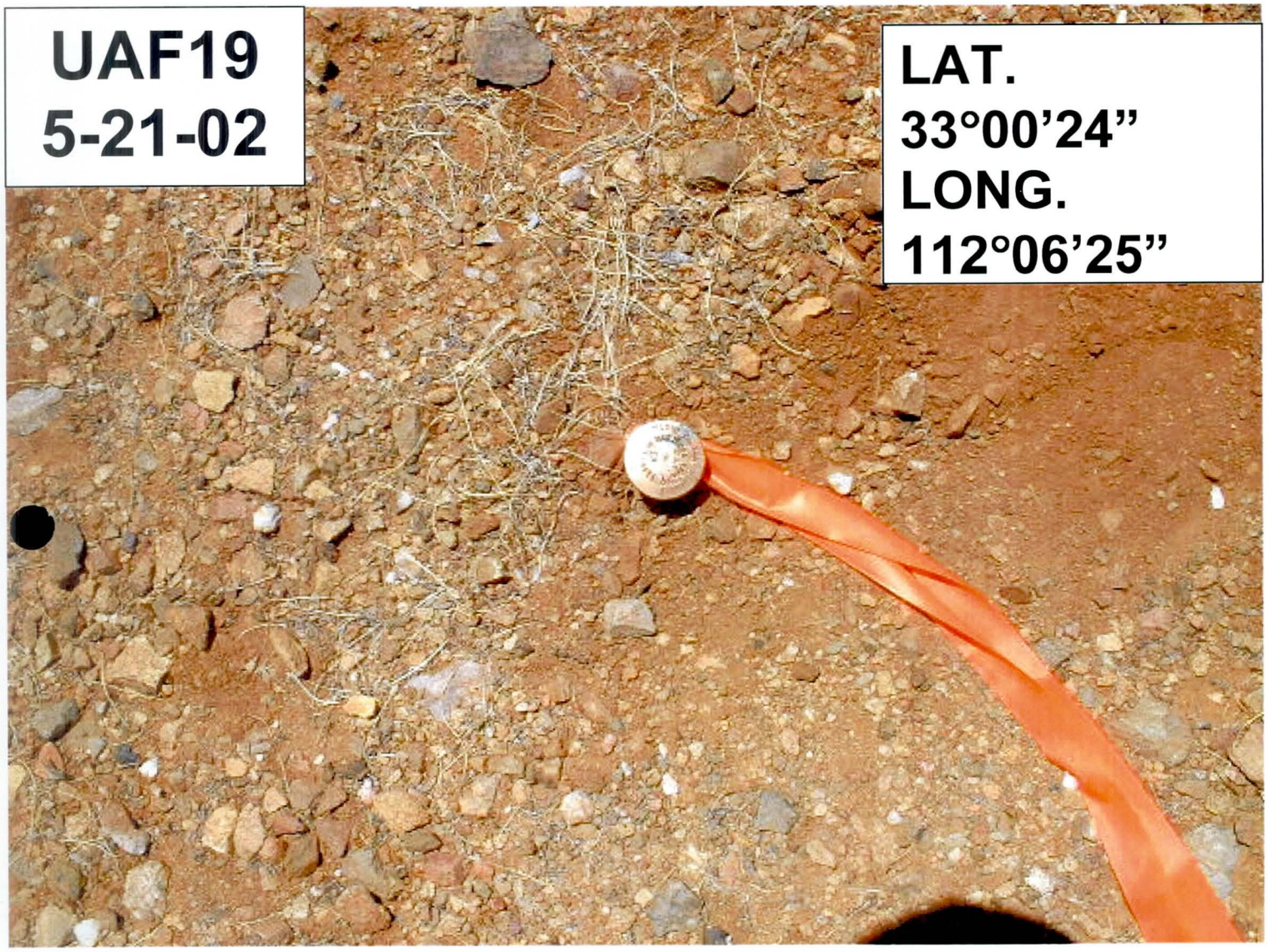
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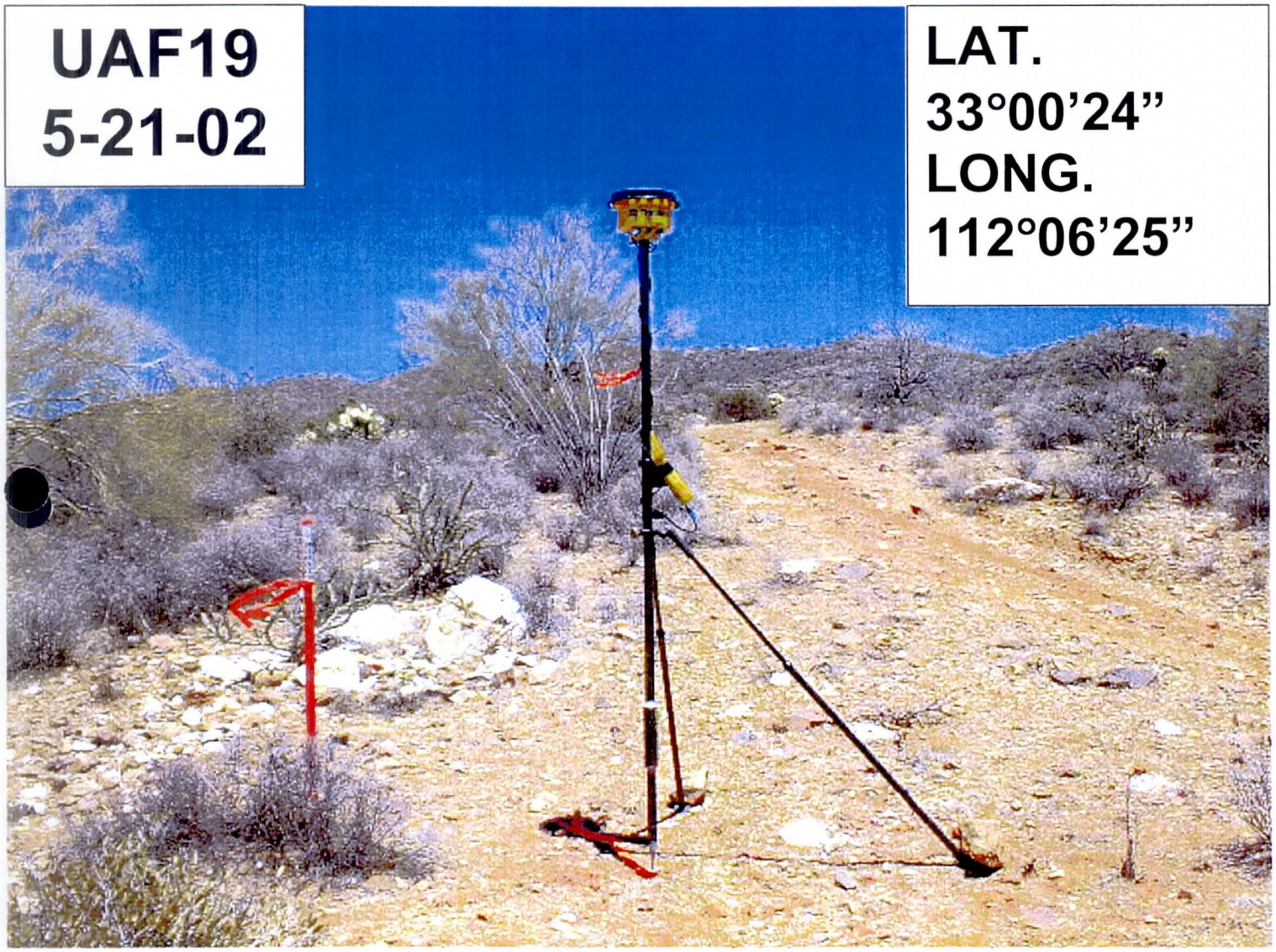
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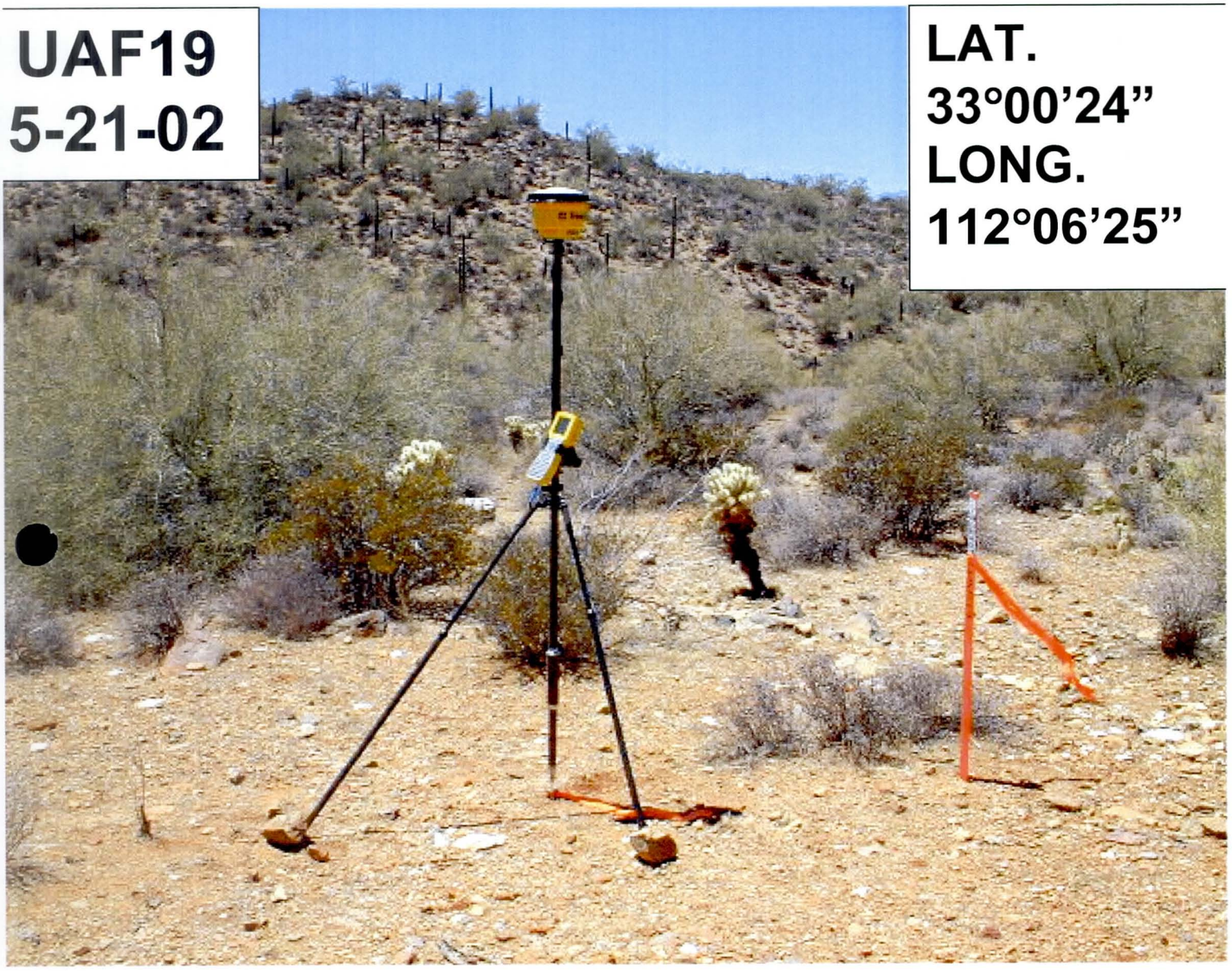
LONG.
112°06'25"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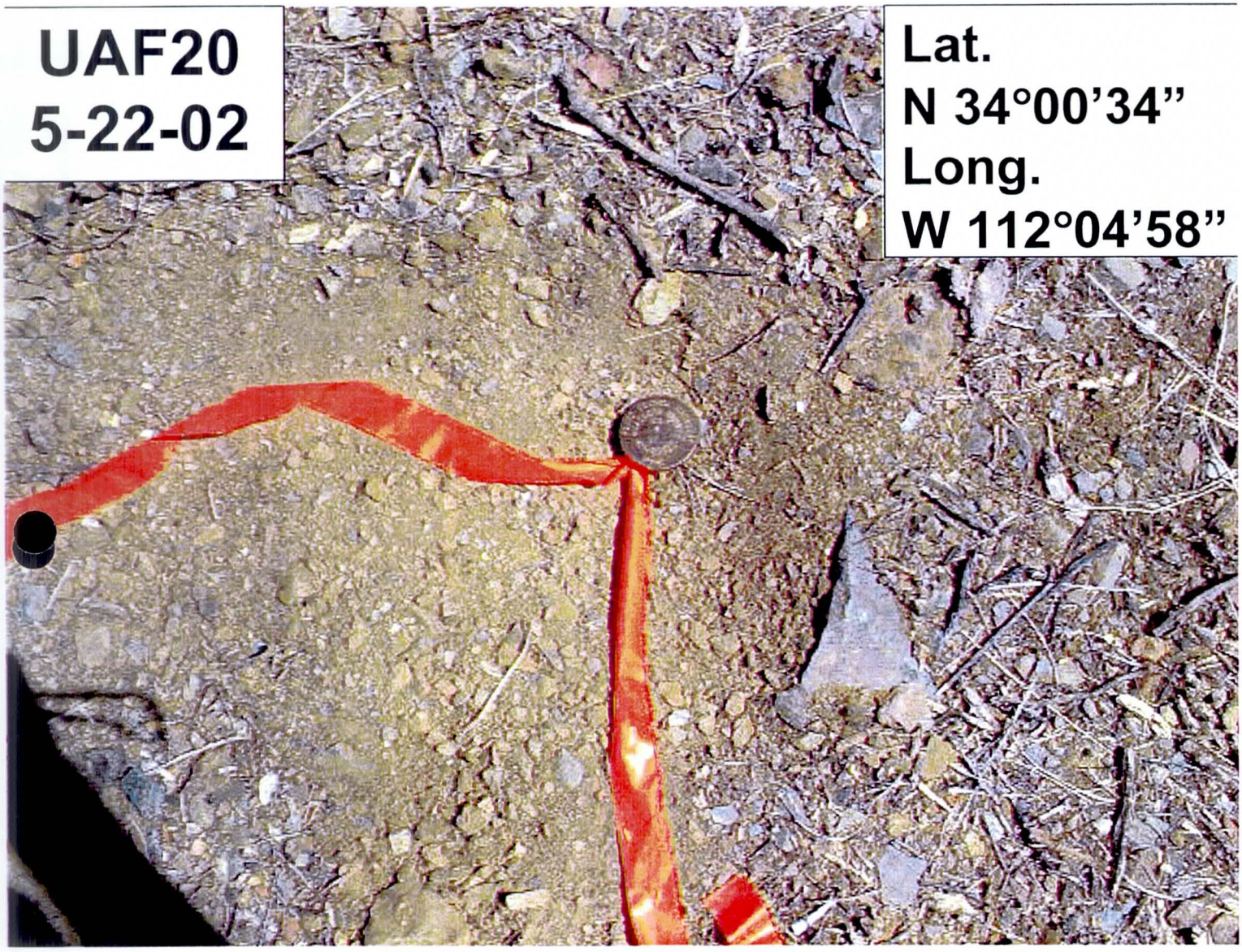
LONG.
112°06'25"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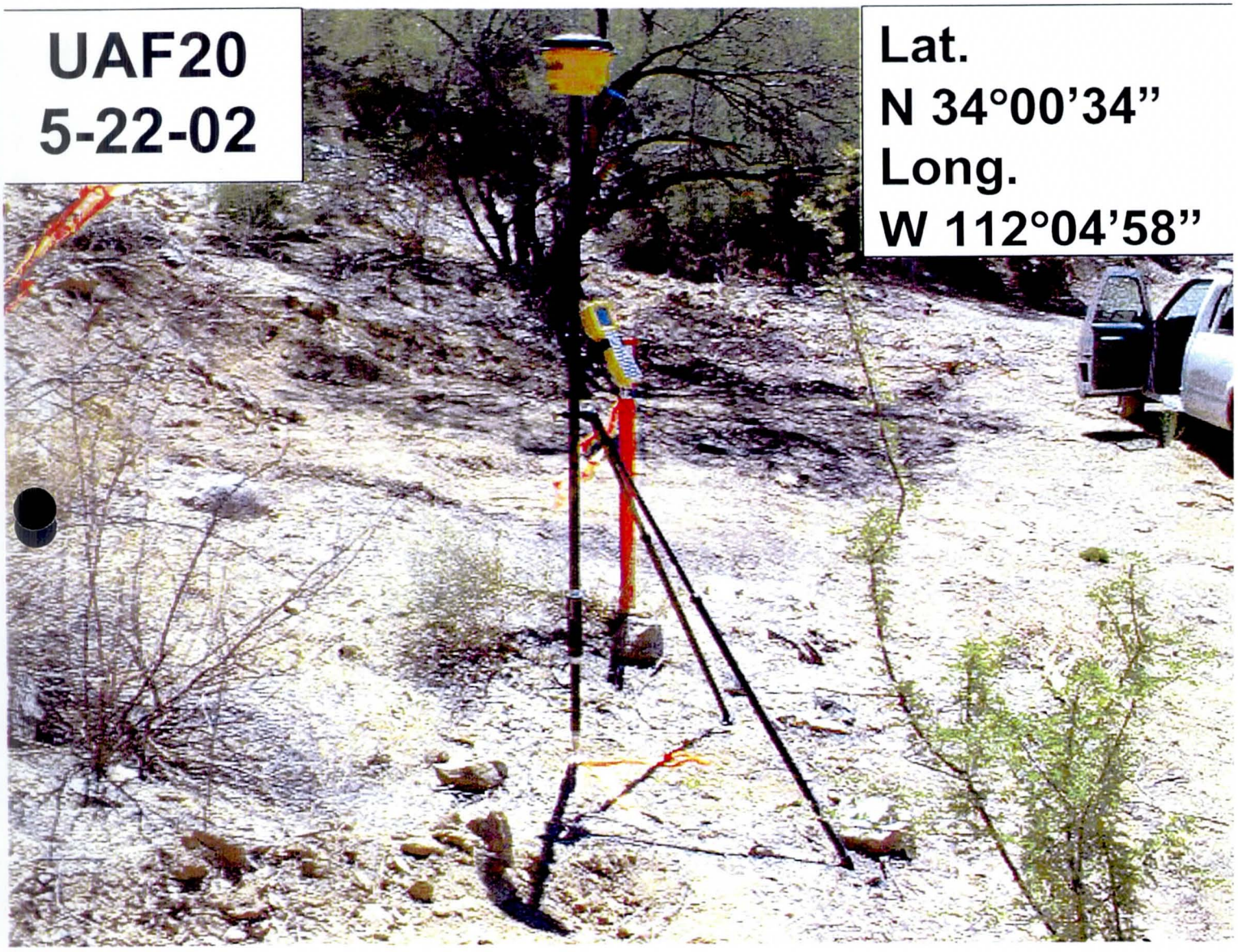
Long.
W 112°04'58"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Long.
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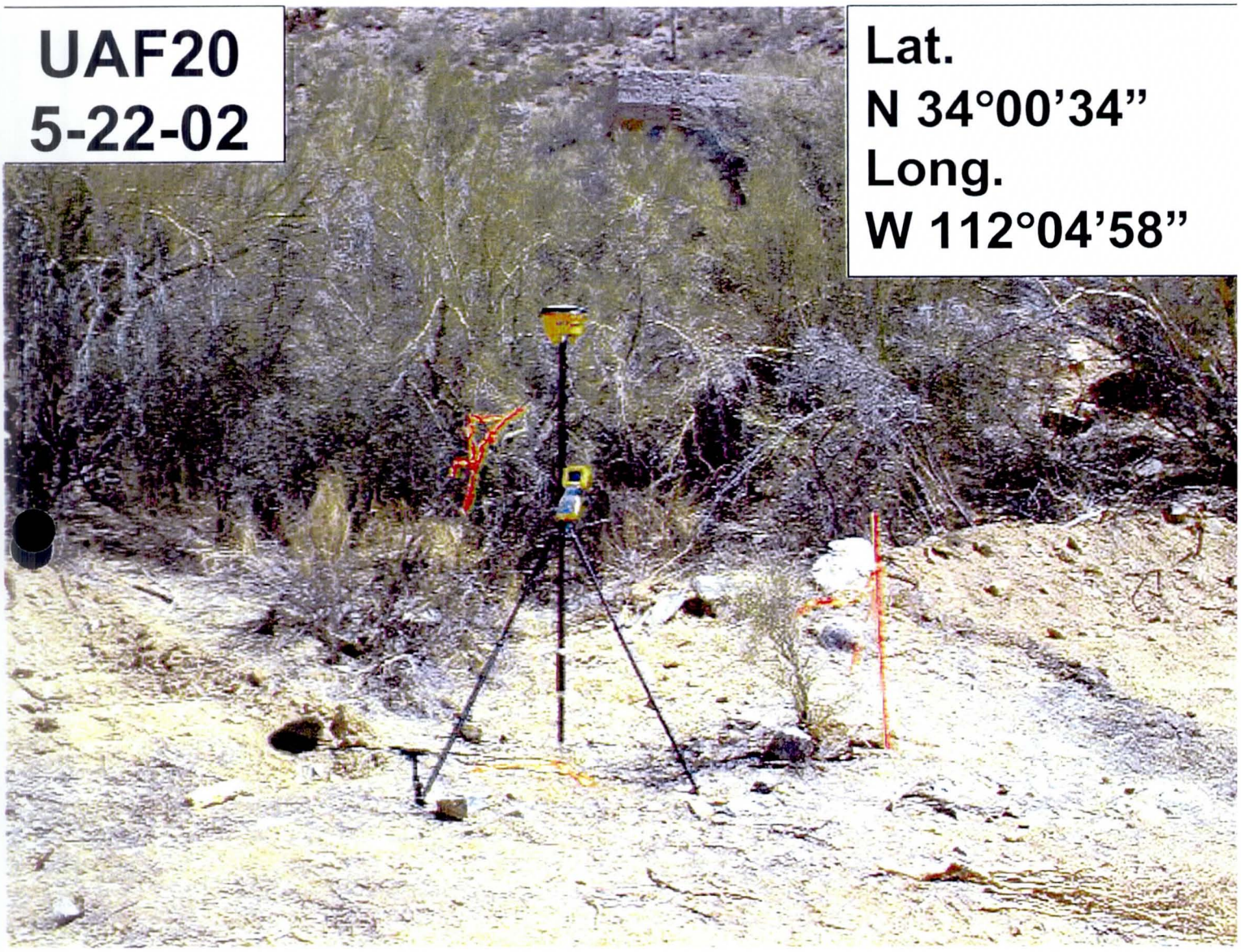
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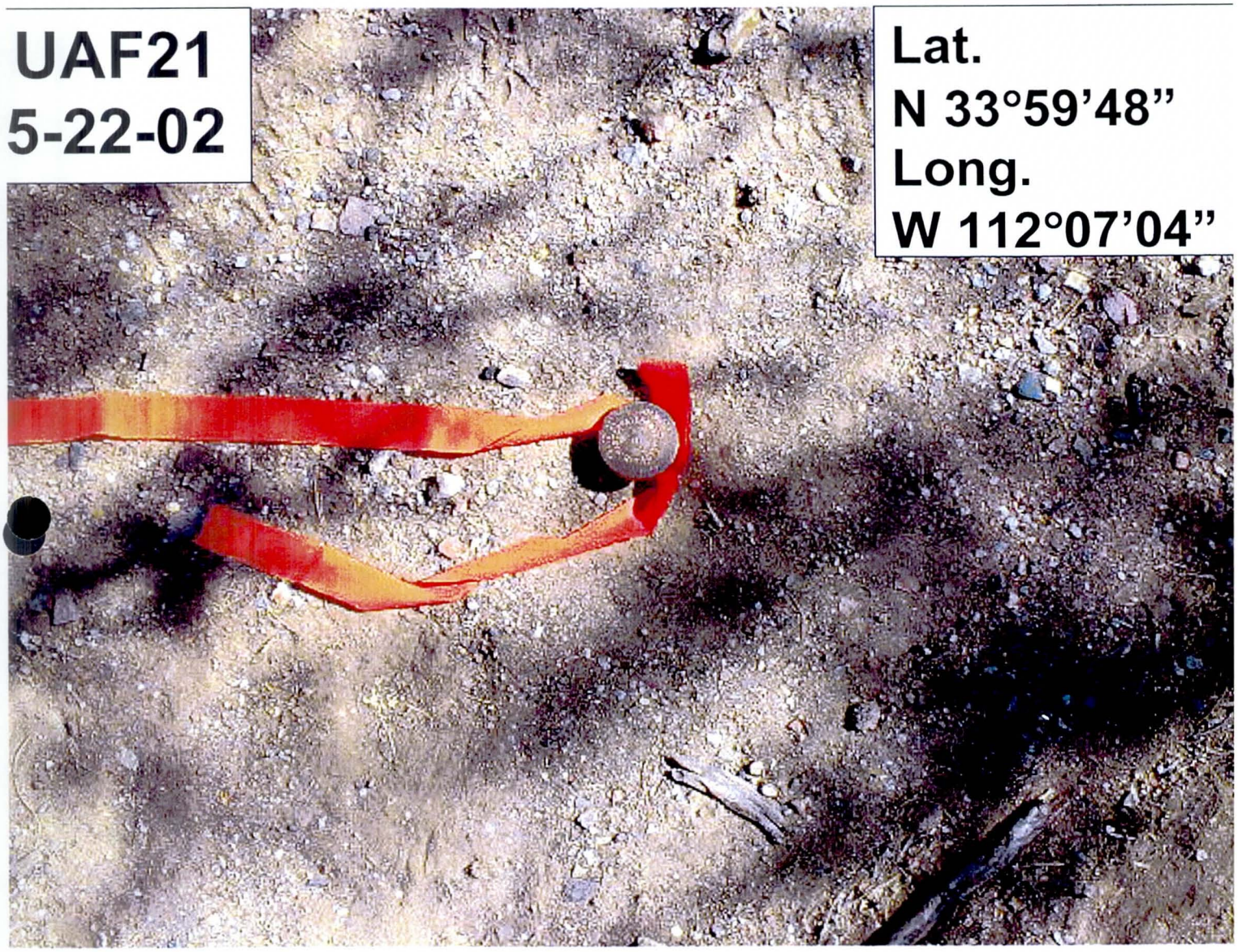
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Long.
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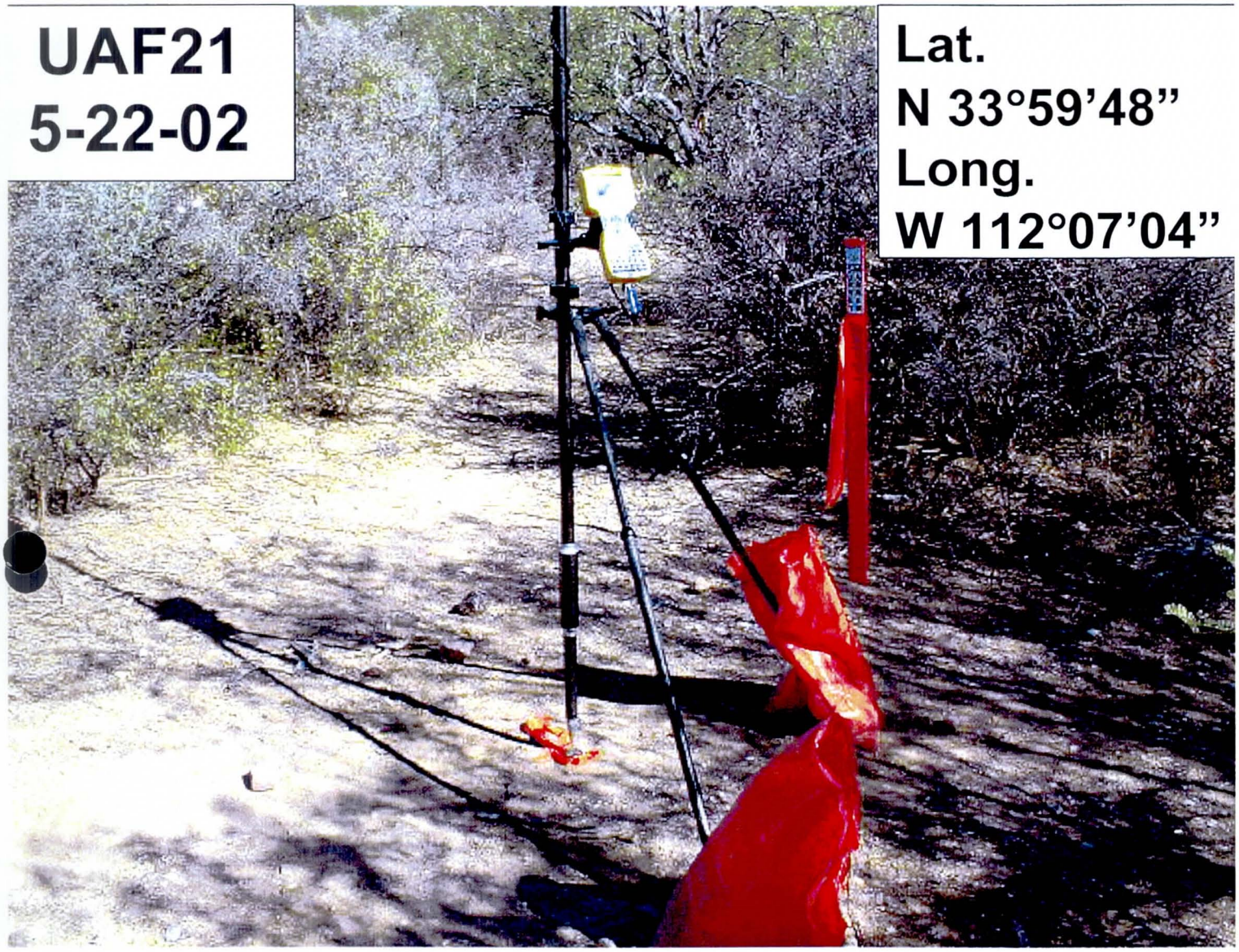
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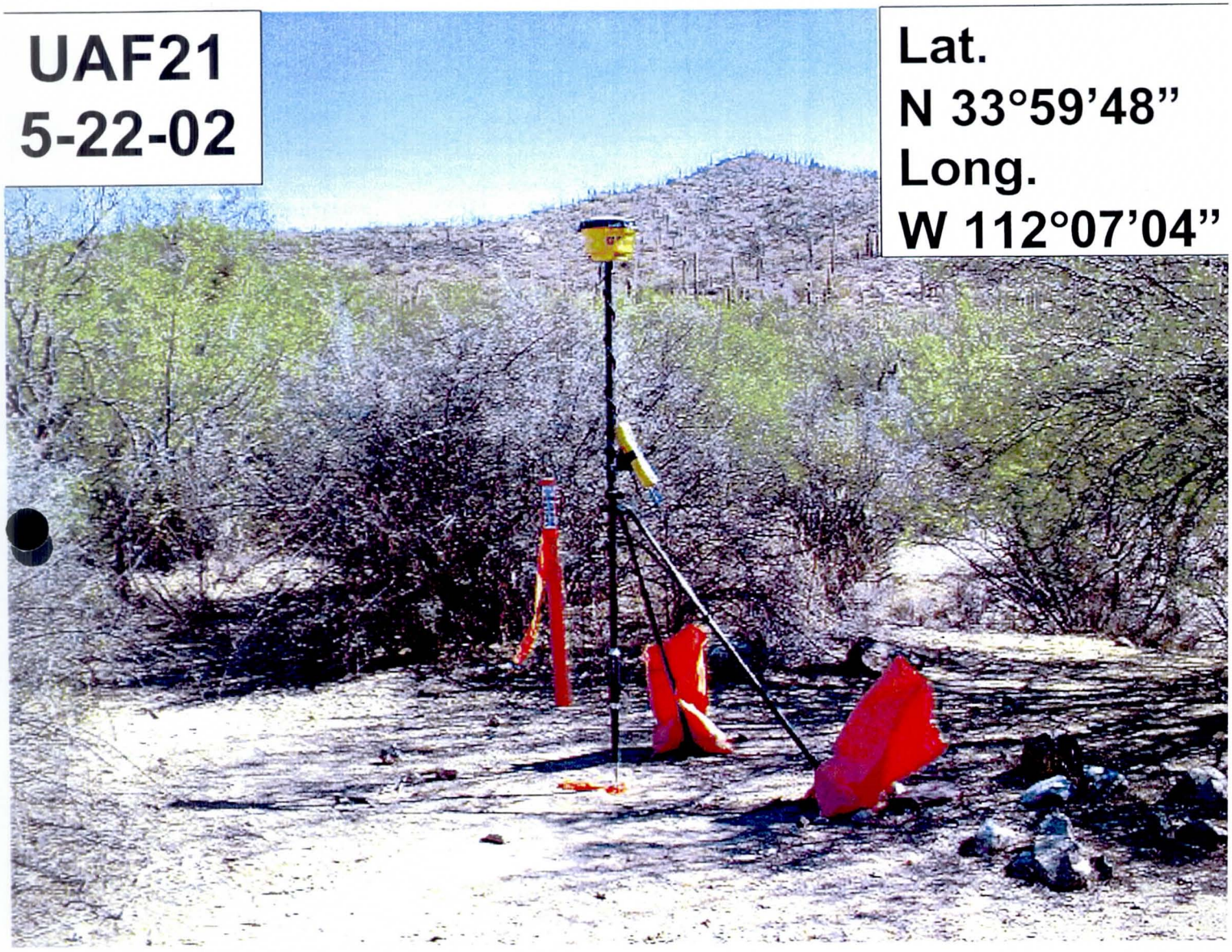
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Long.
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UAF22
5-22-02

Lat.
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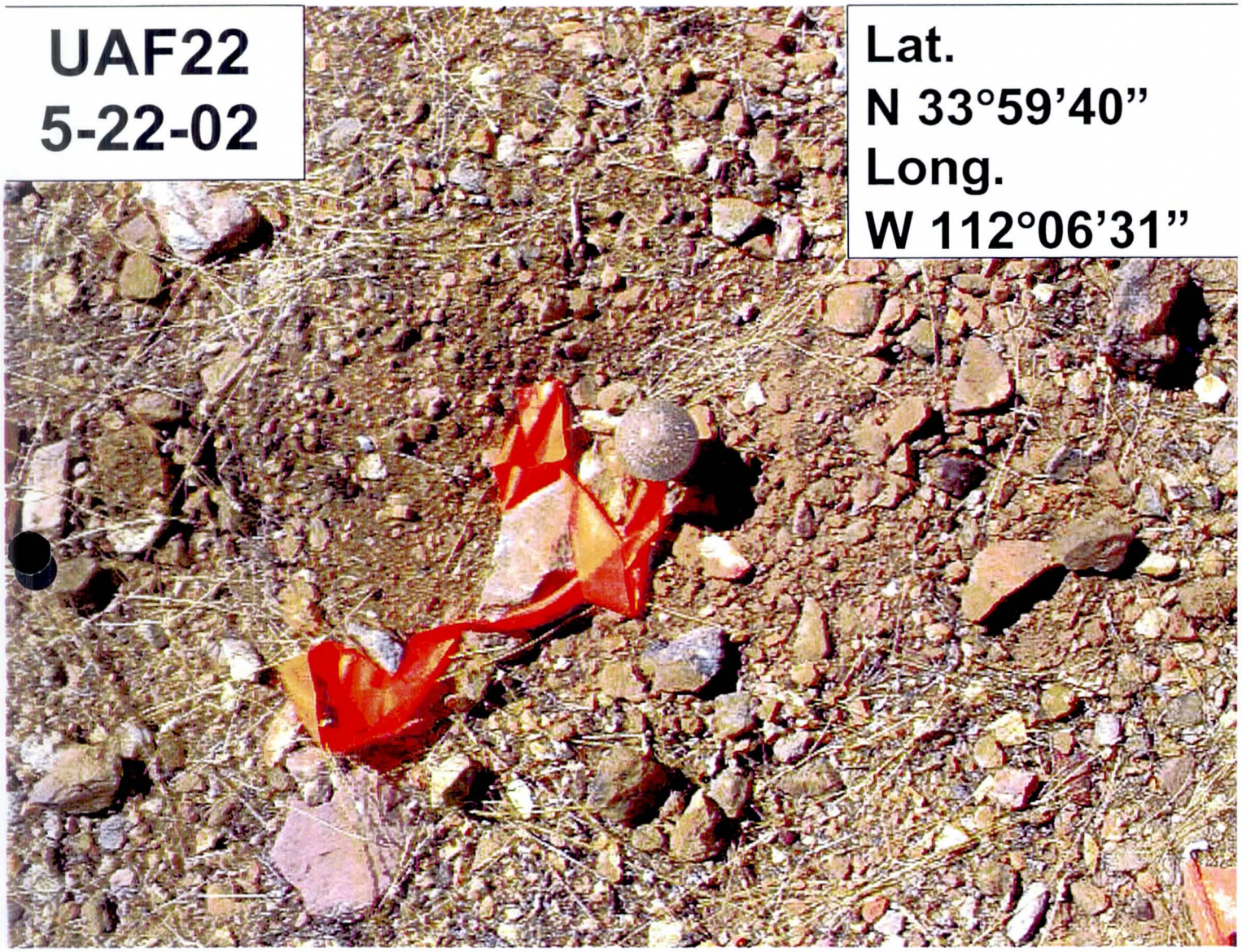
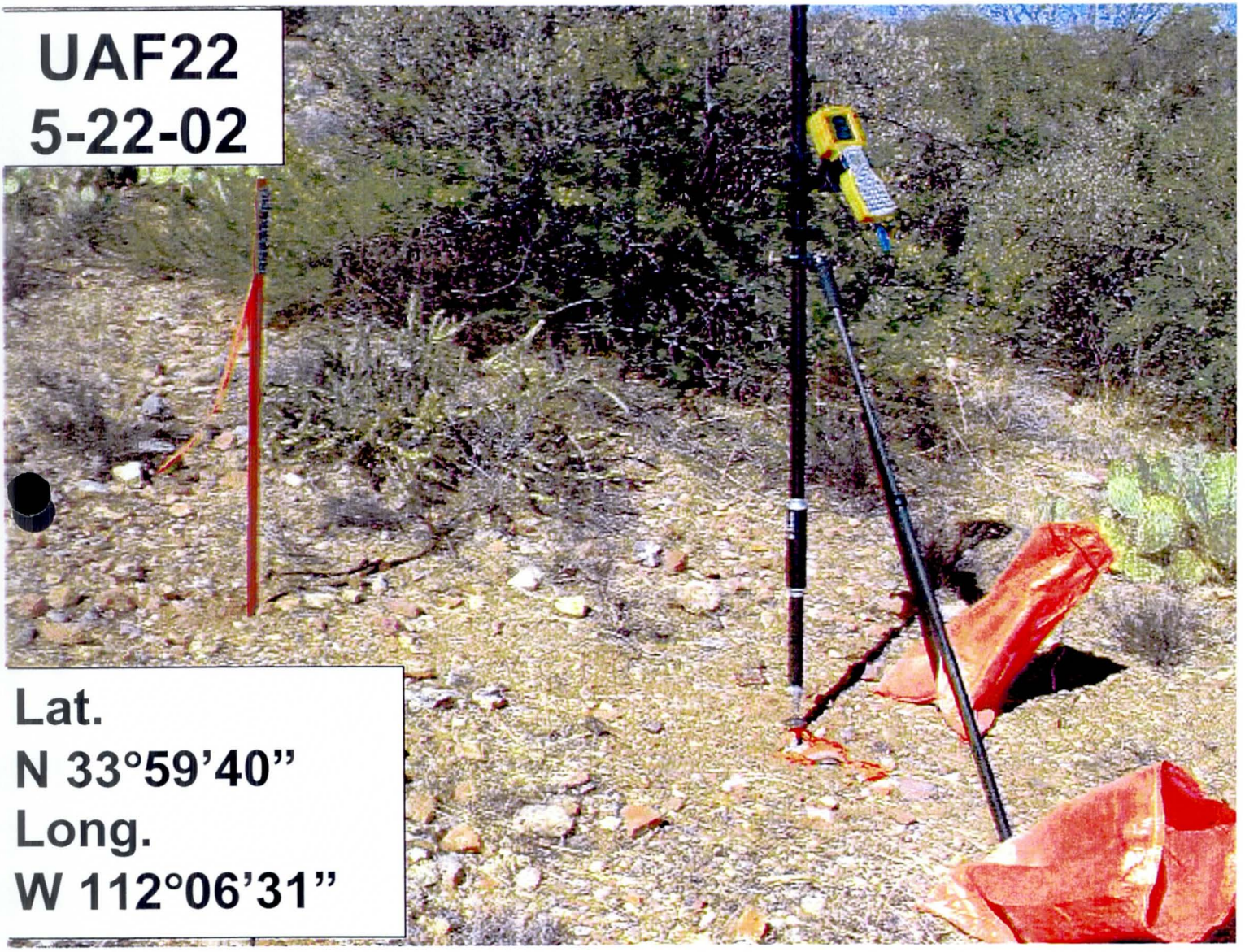
Long.
W 112°06'31"

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5-22-02
Lat.
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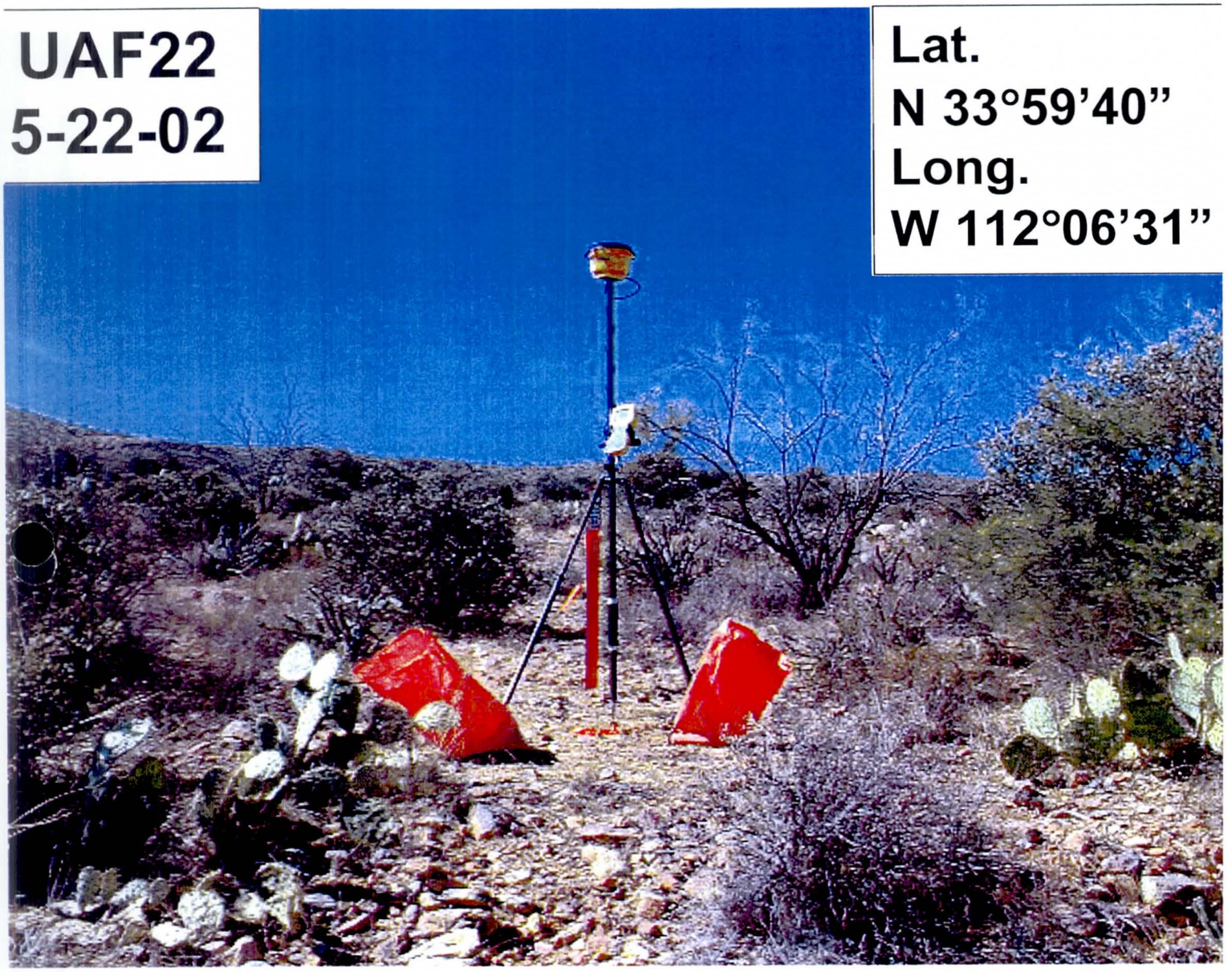
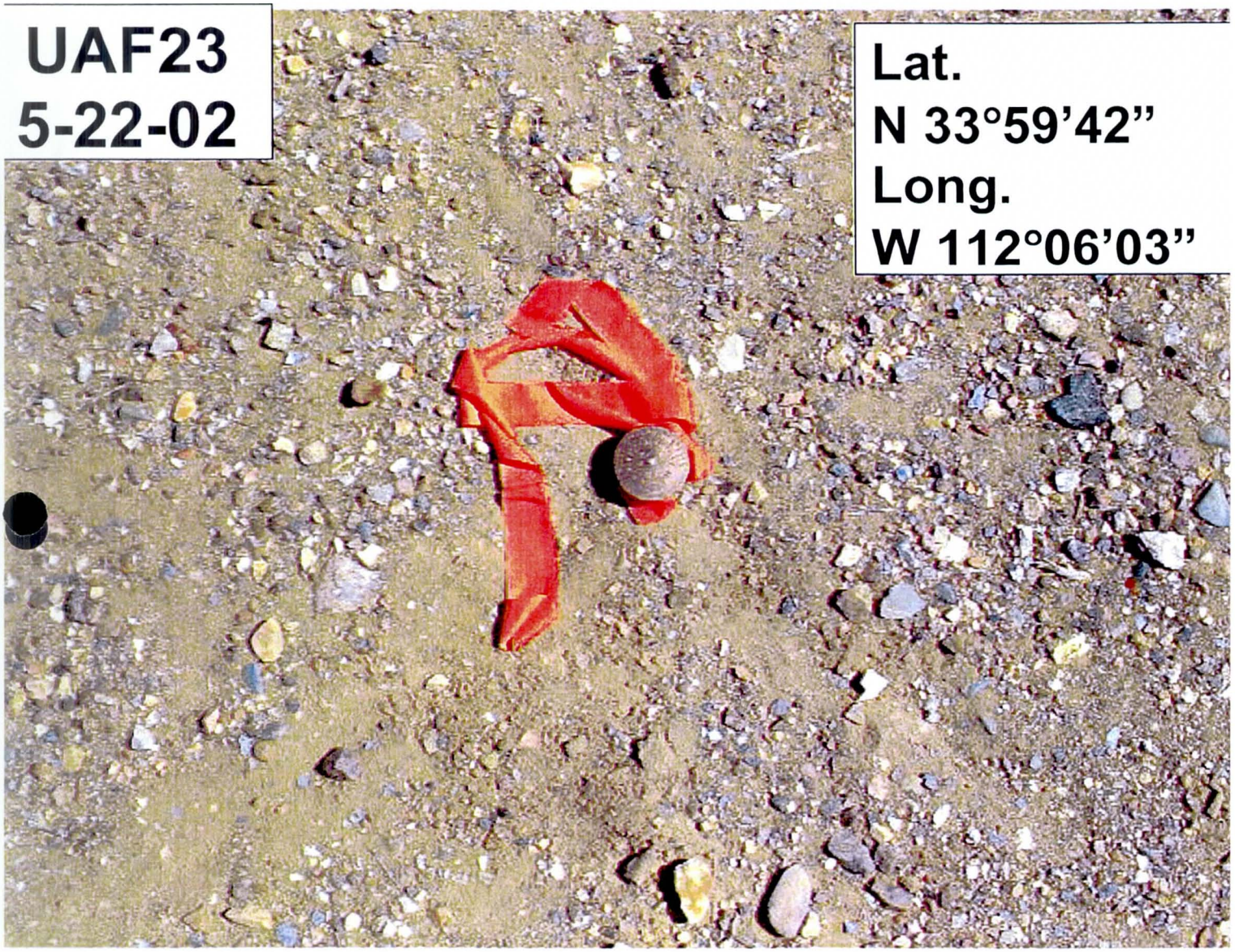
Long.
W 112°06'31"

UAF22
5-22-02

Lat.
N 33°59'40"
Long.
W 112°06'31"

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Long.
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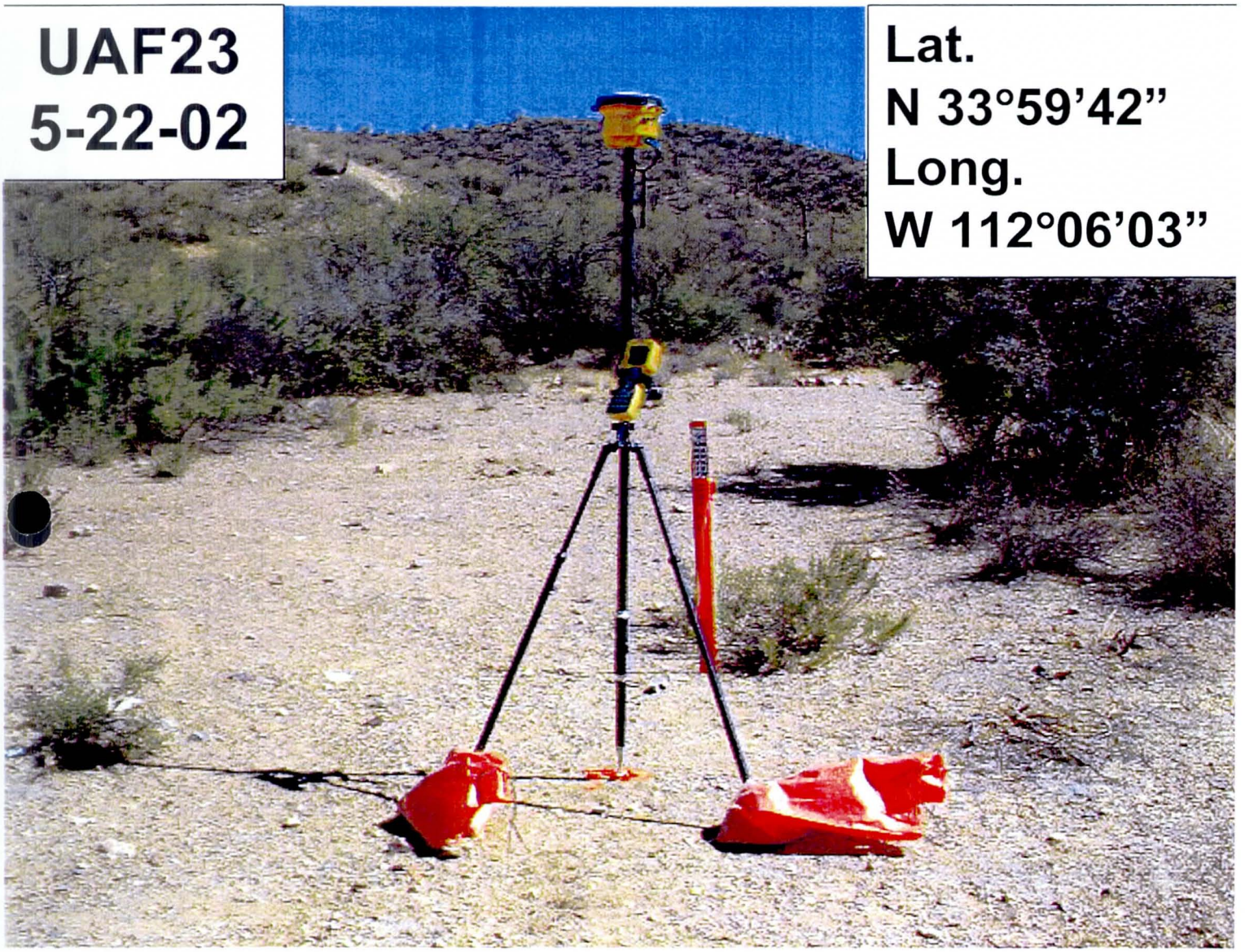
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Long.
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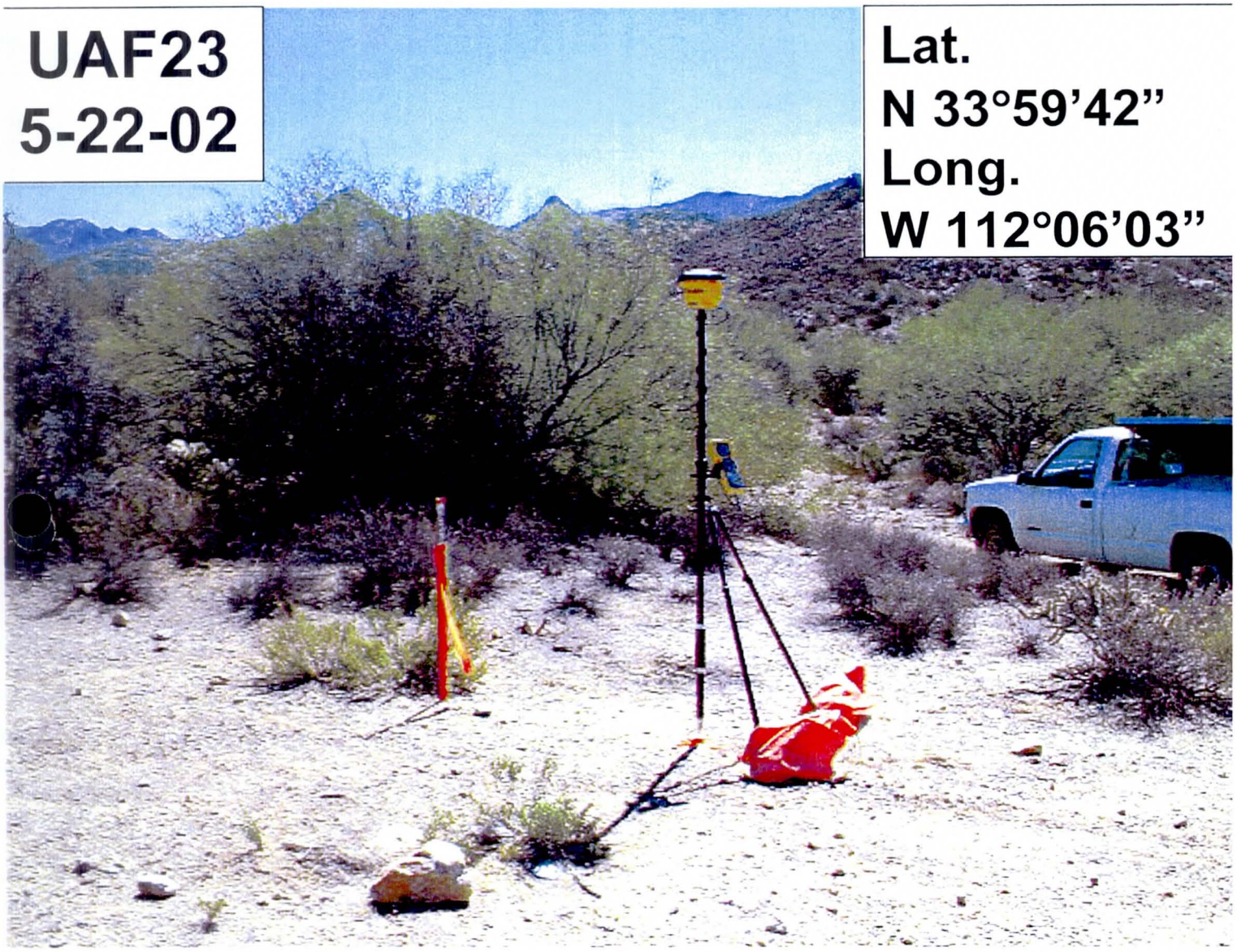
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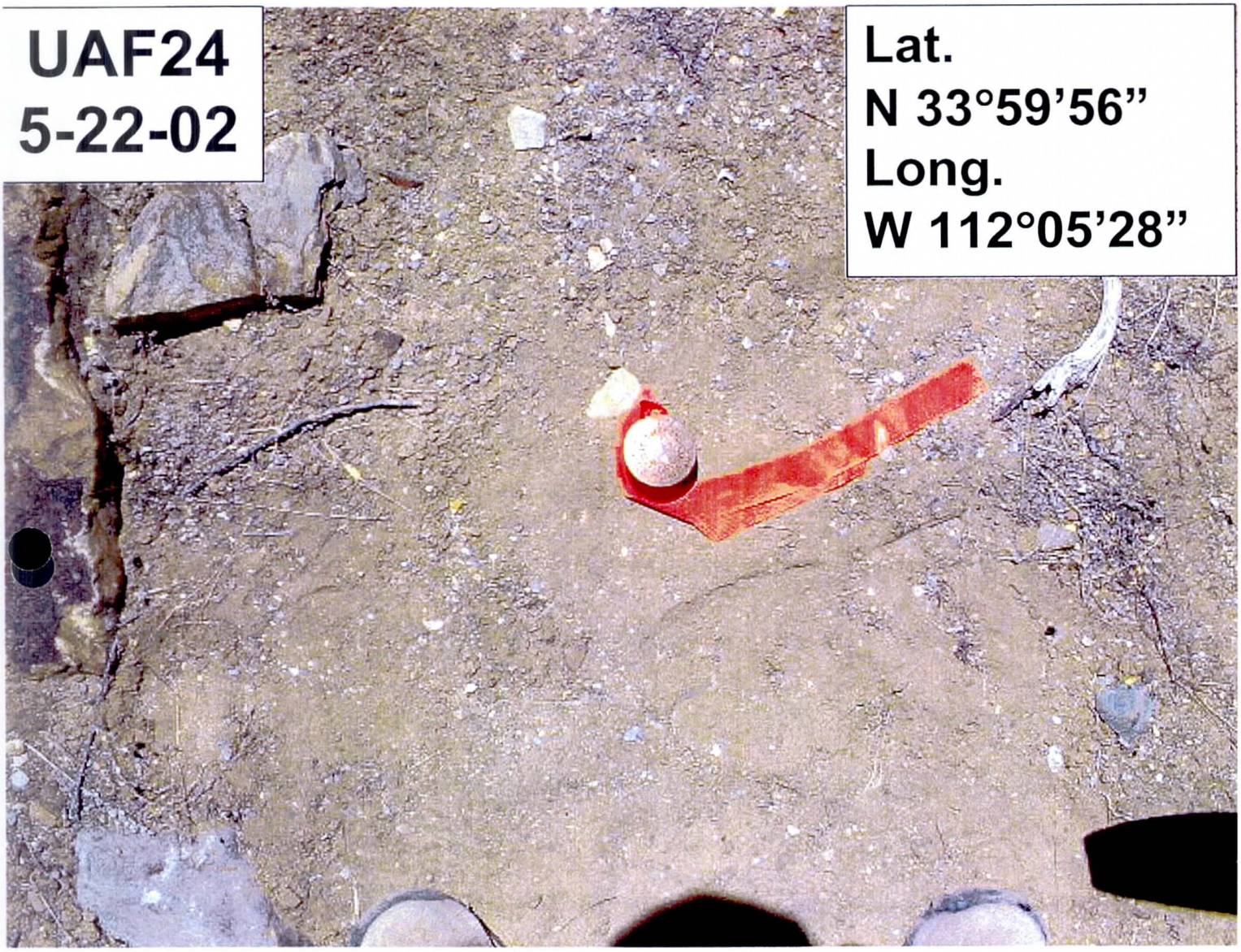
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Long.
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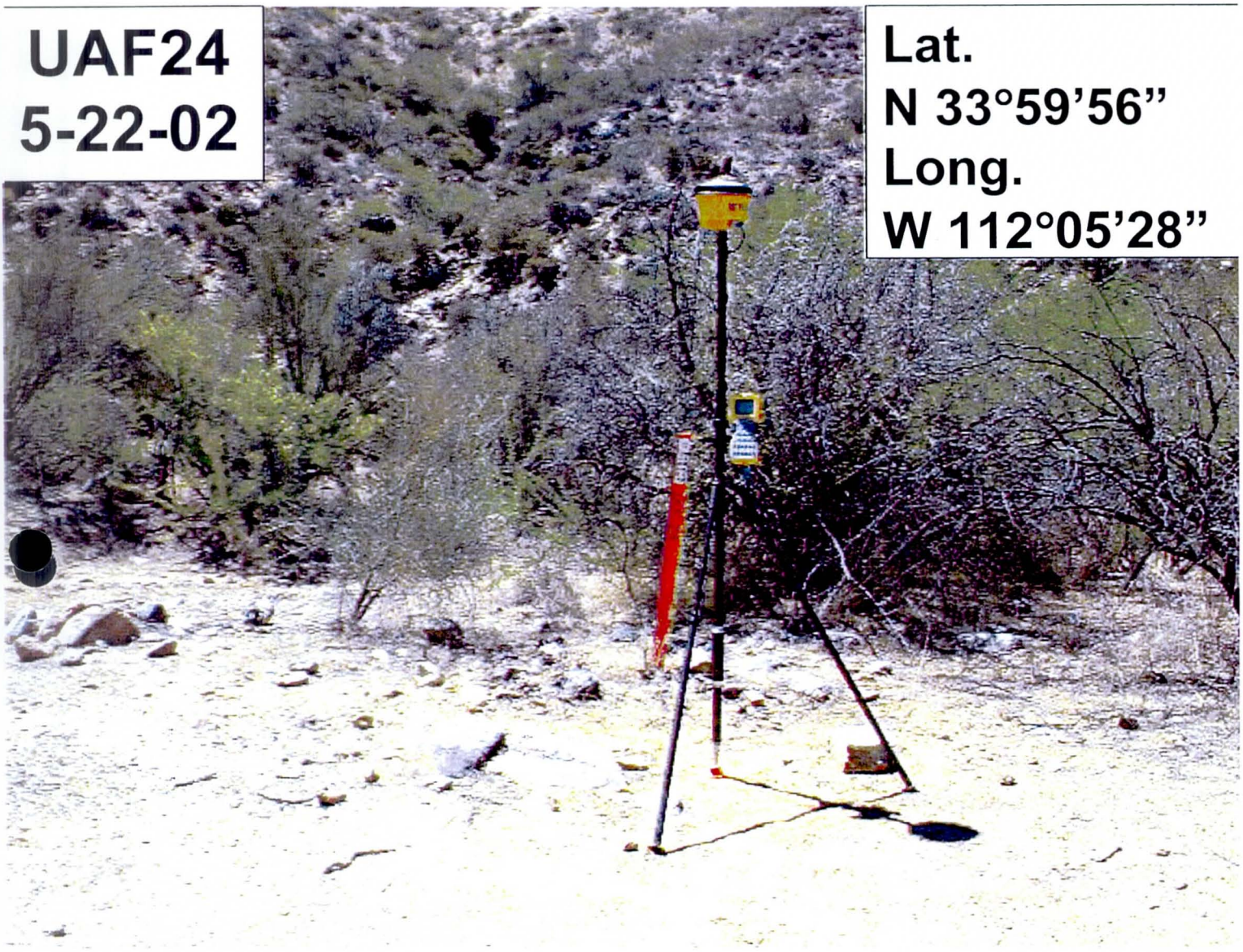
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Long.
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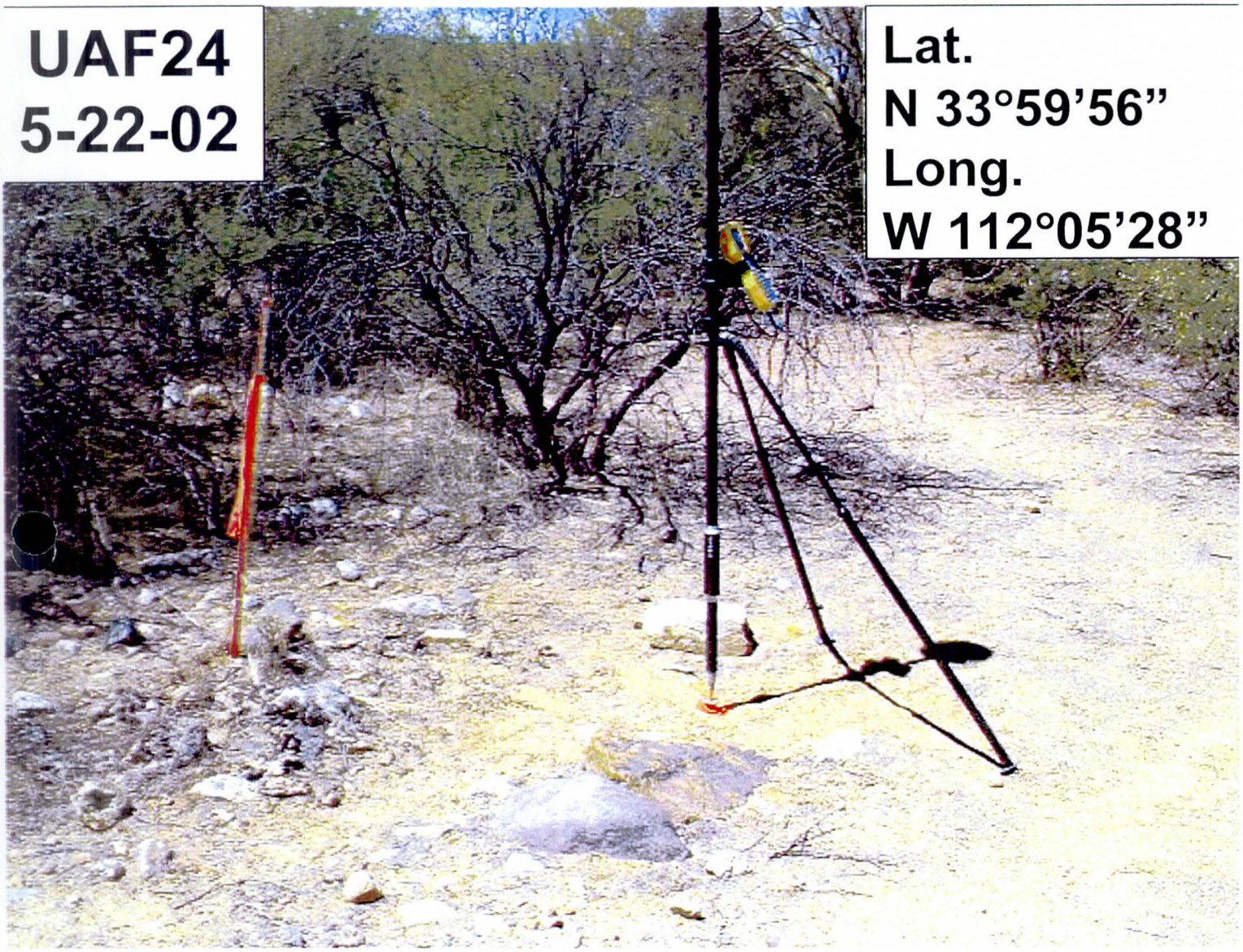
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5-22-02
Lat.
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Long.
W 112°05'28"

UAF25
5-22-02

Lat.
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Long.
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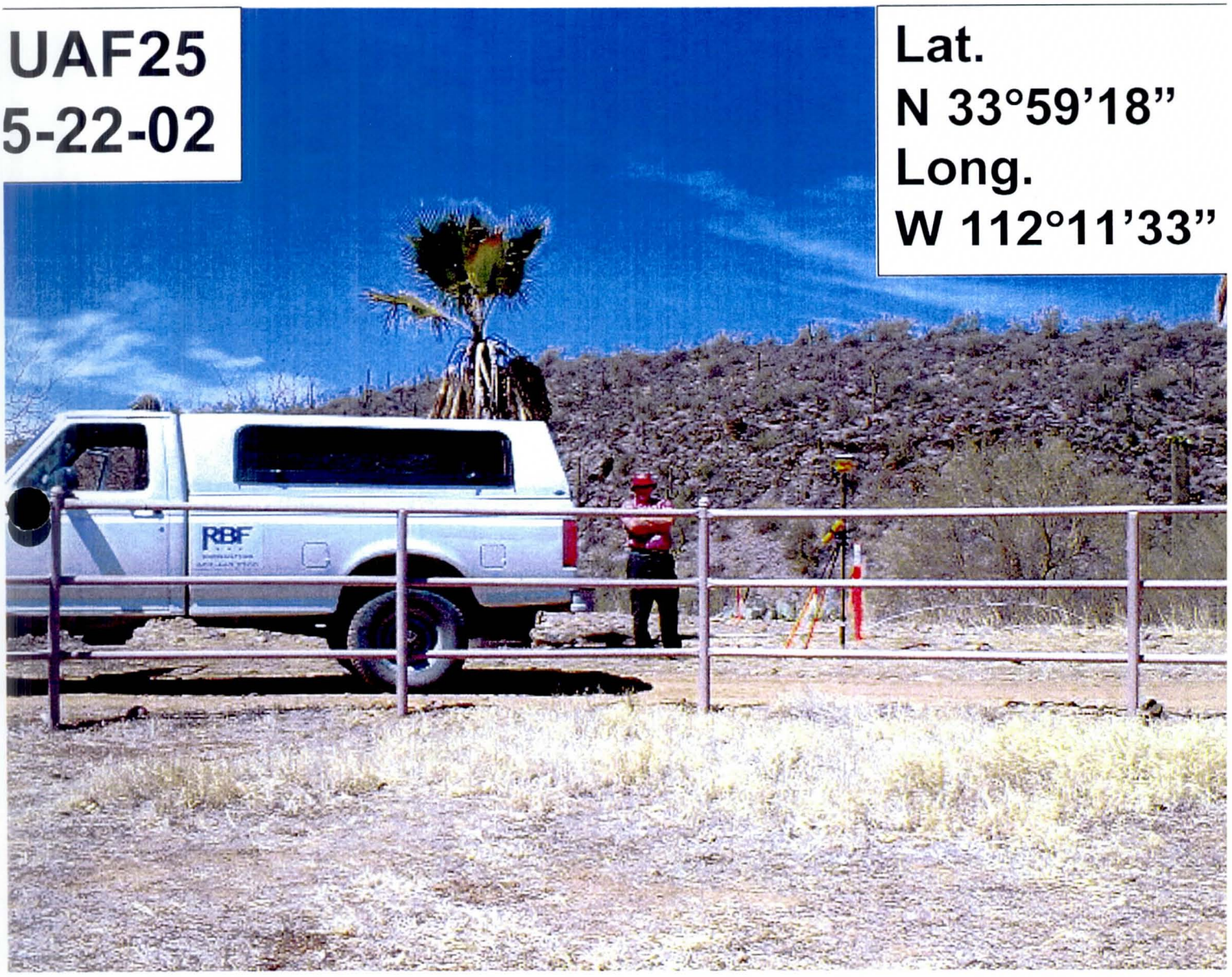
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5-22-02
Lat.
N 33°59'18"
Long.
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RBF

UAF25
5-22-02
Lat.
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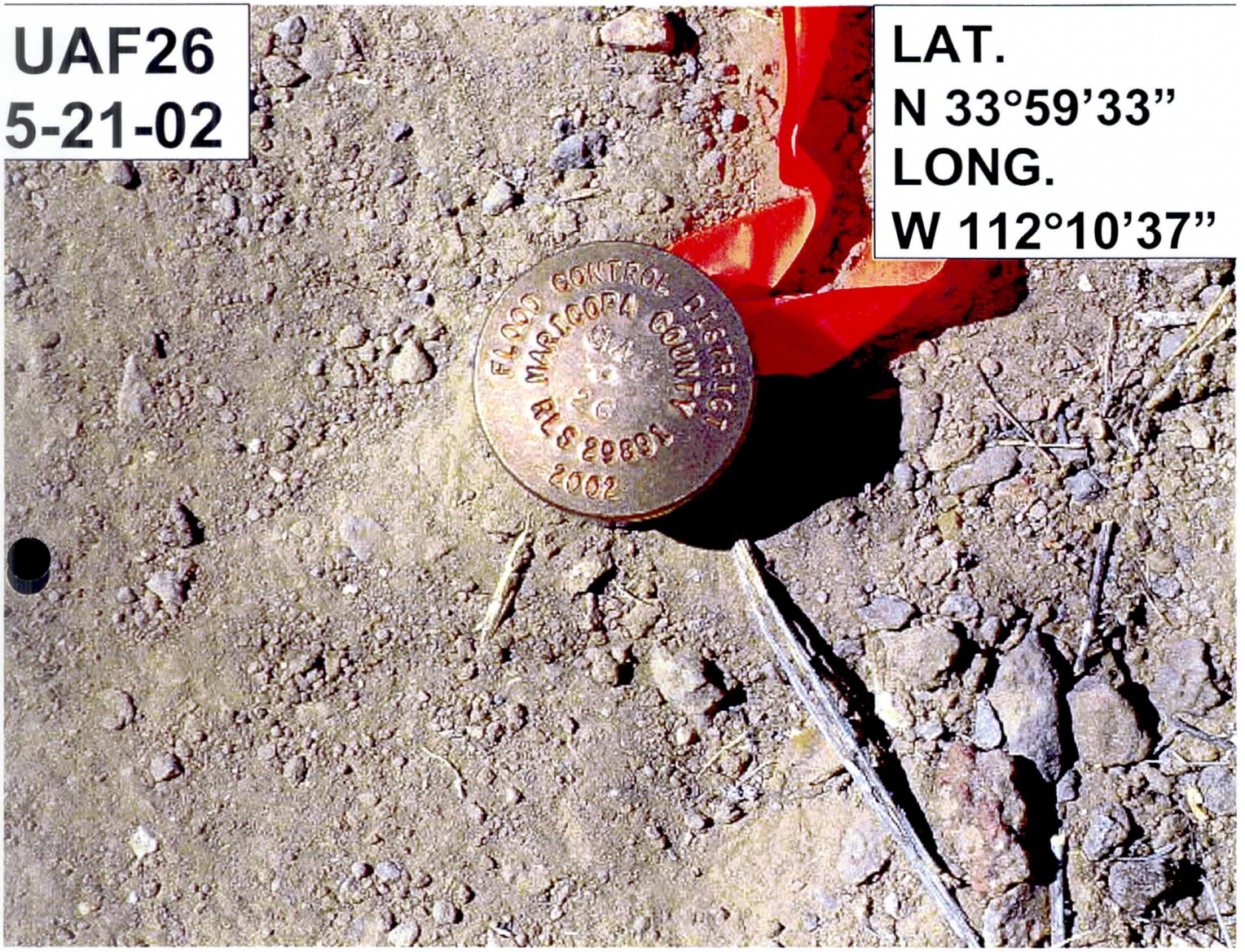
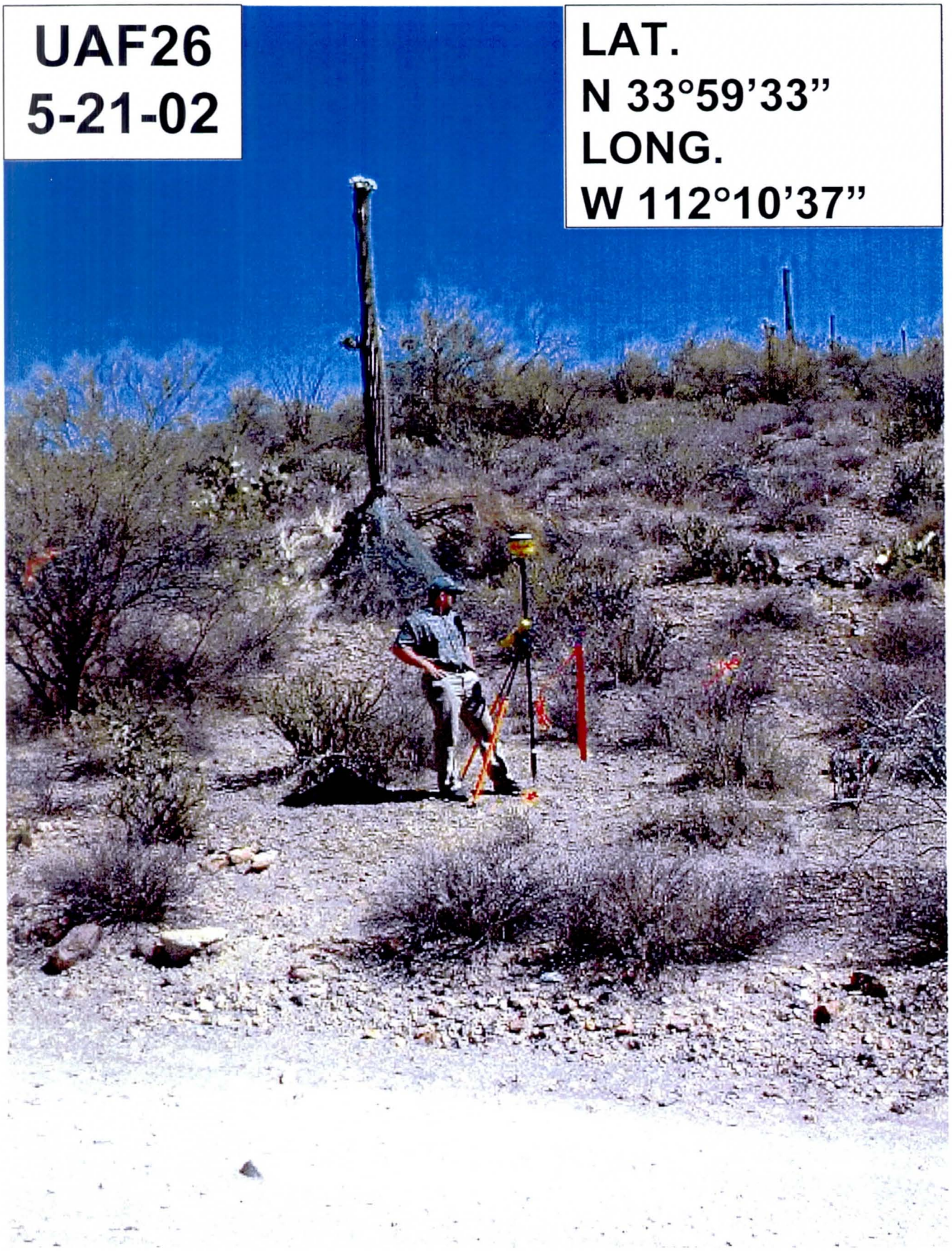
Long.
W 112°11'33'


UAF26
5-21-02
LAT.
N 33°59'33"
LONG.
W 112°10'37"
FLOOD CONTROL DISTRICT
MARICOPA COUNTY
RLS 29893
2002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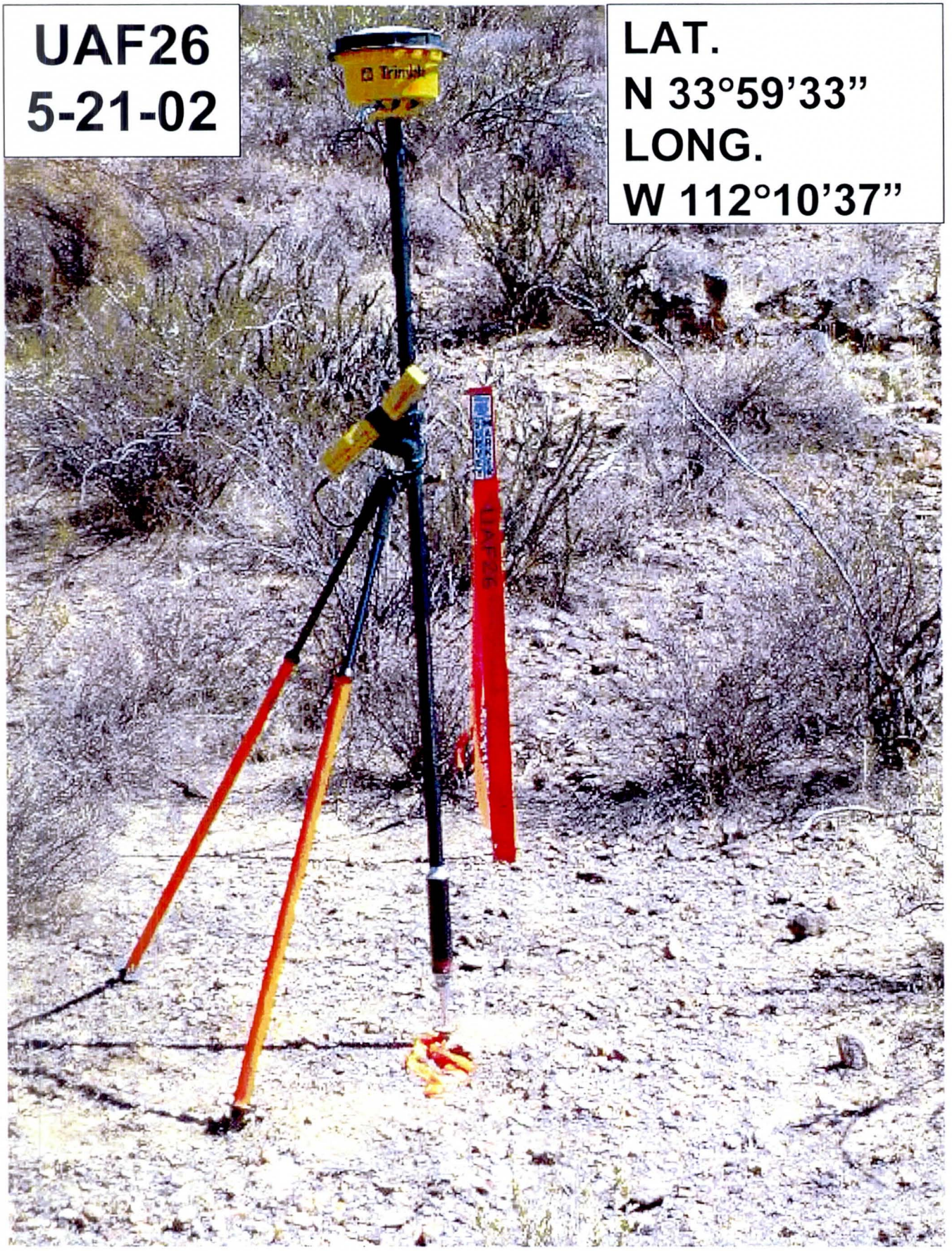
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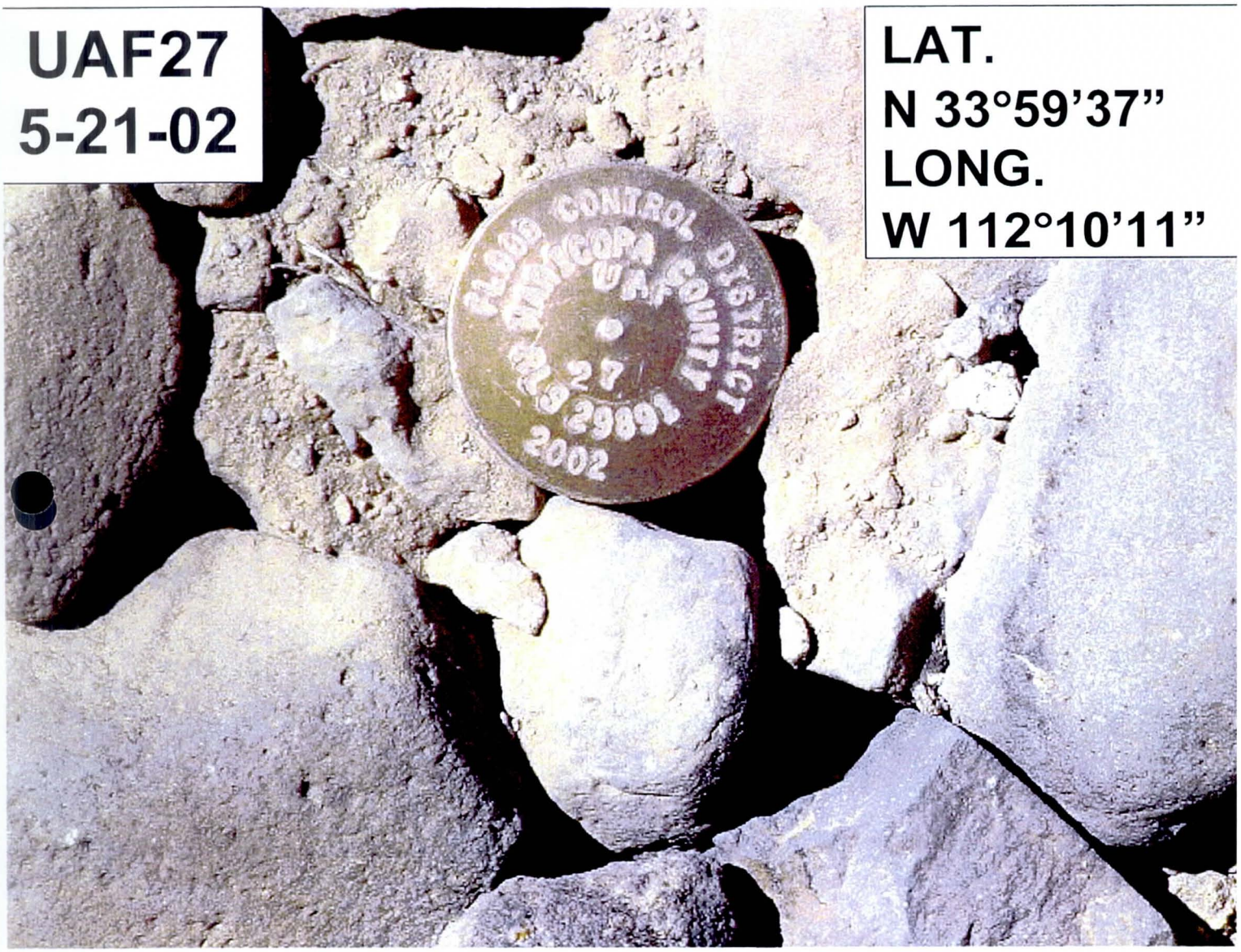
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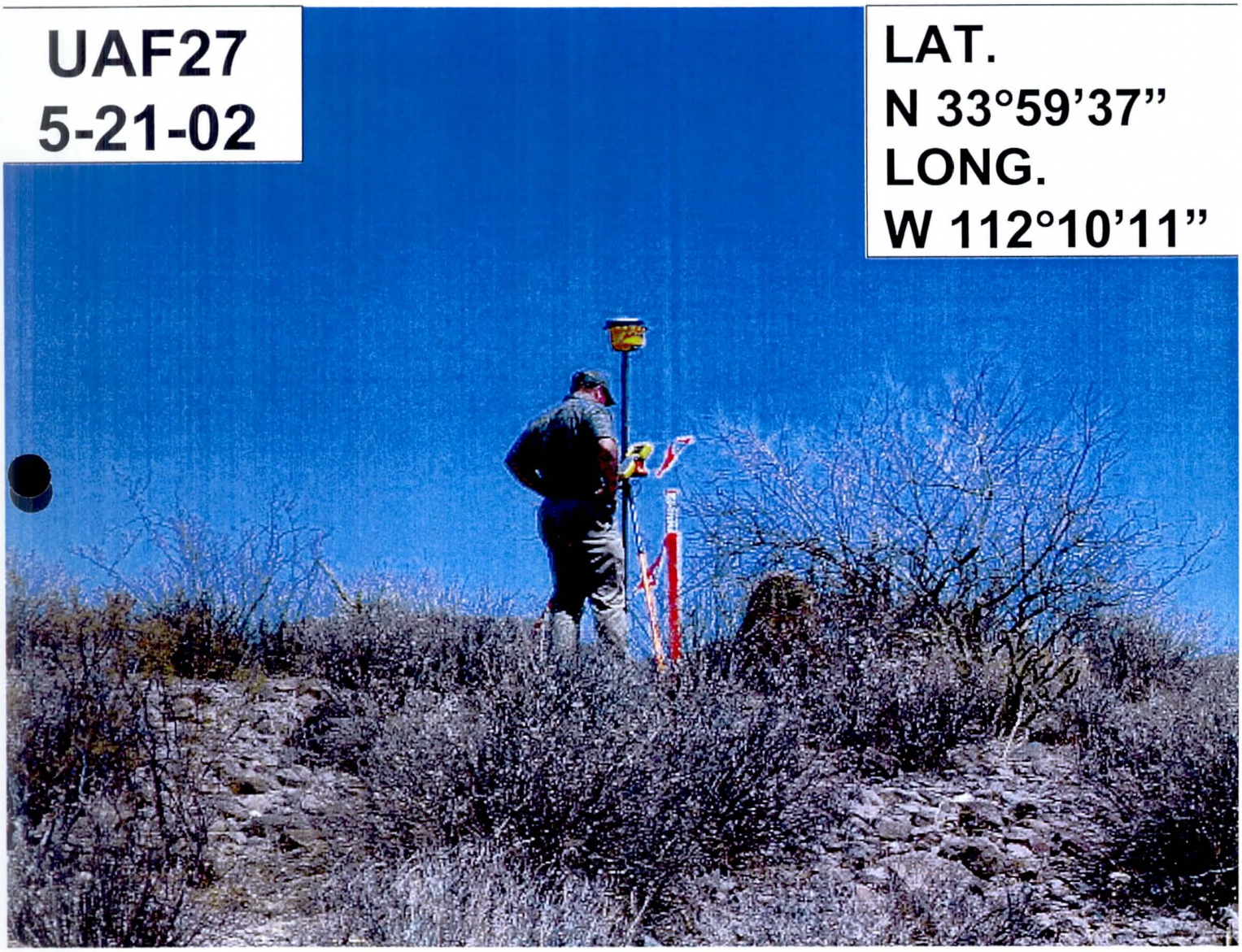
5-21-02
LAT.
N 33°59'37"
LONG.
W 112°10'11"
FLOOD CONTROL DISTRICT
MARICOPA COUNTY
UAF
27
2002

UAF27
5-21-02

LAT.
N 33°59'37"
LONG.
W 112°10'11"



UAF27
5-21-02

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LONG.
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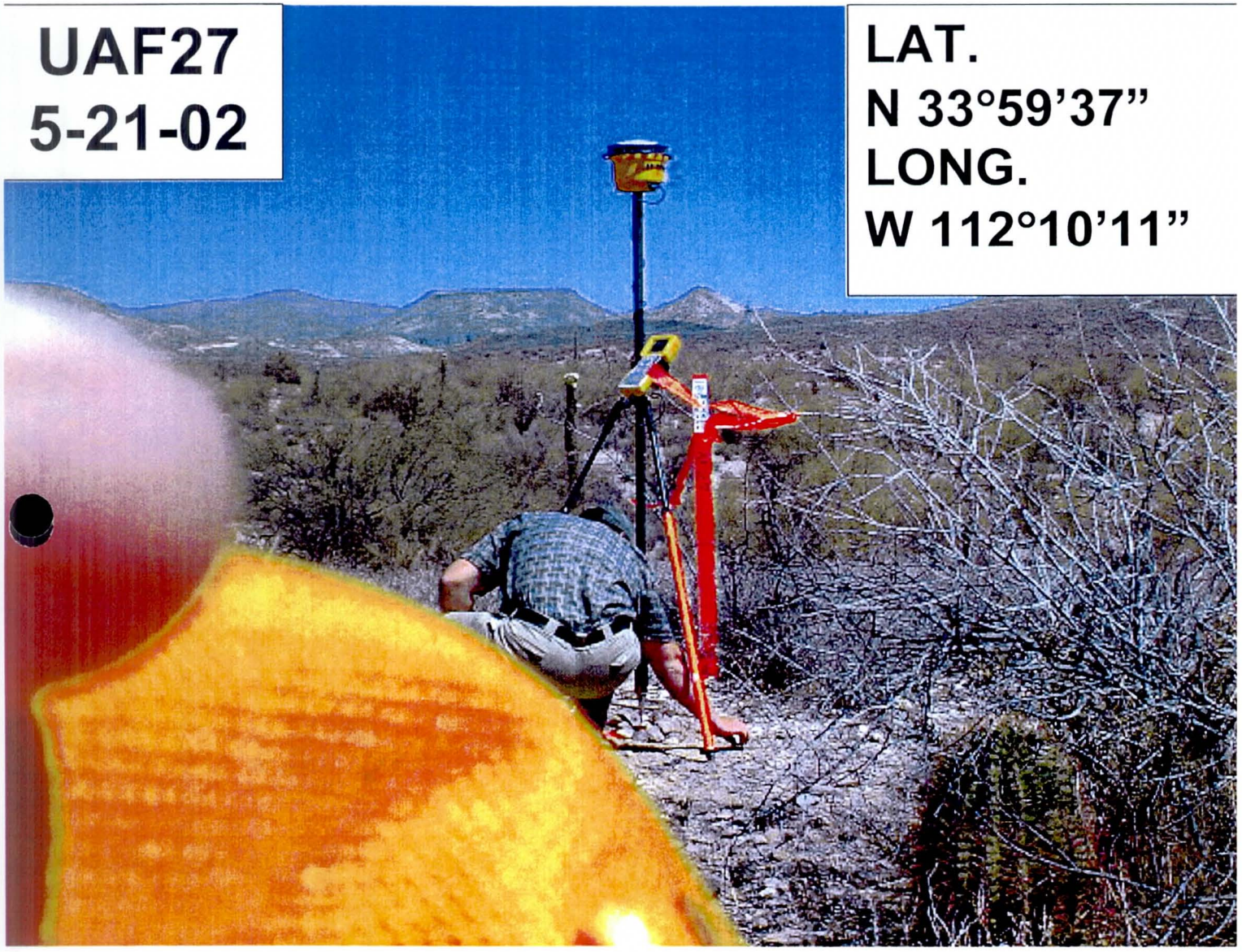

UAF28
5-21-02

LAT.
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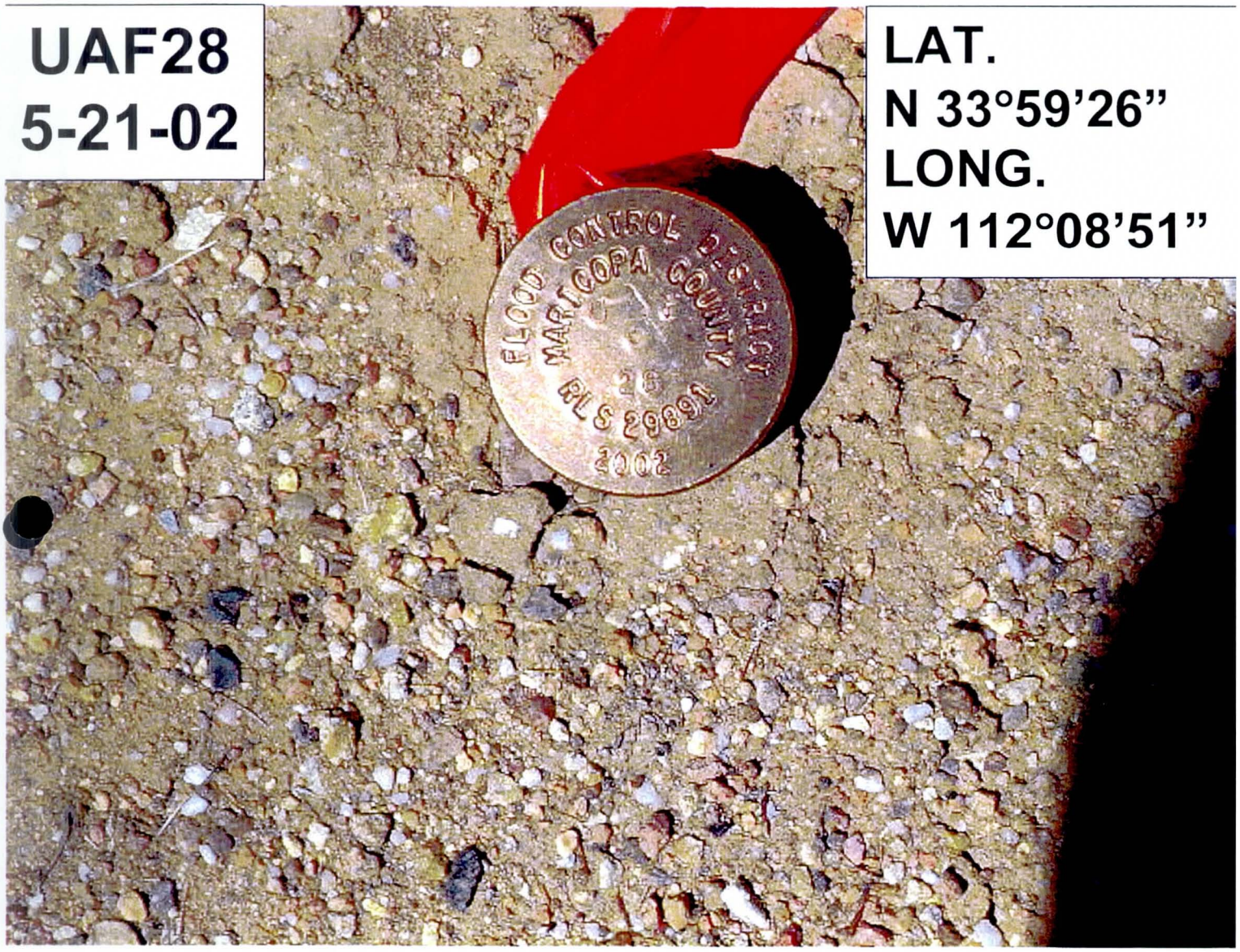
LONG.
W 112°08'51"



UAF28
5-21-02

LAT.
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LONG.
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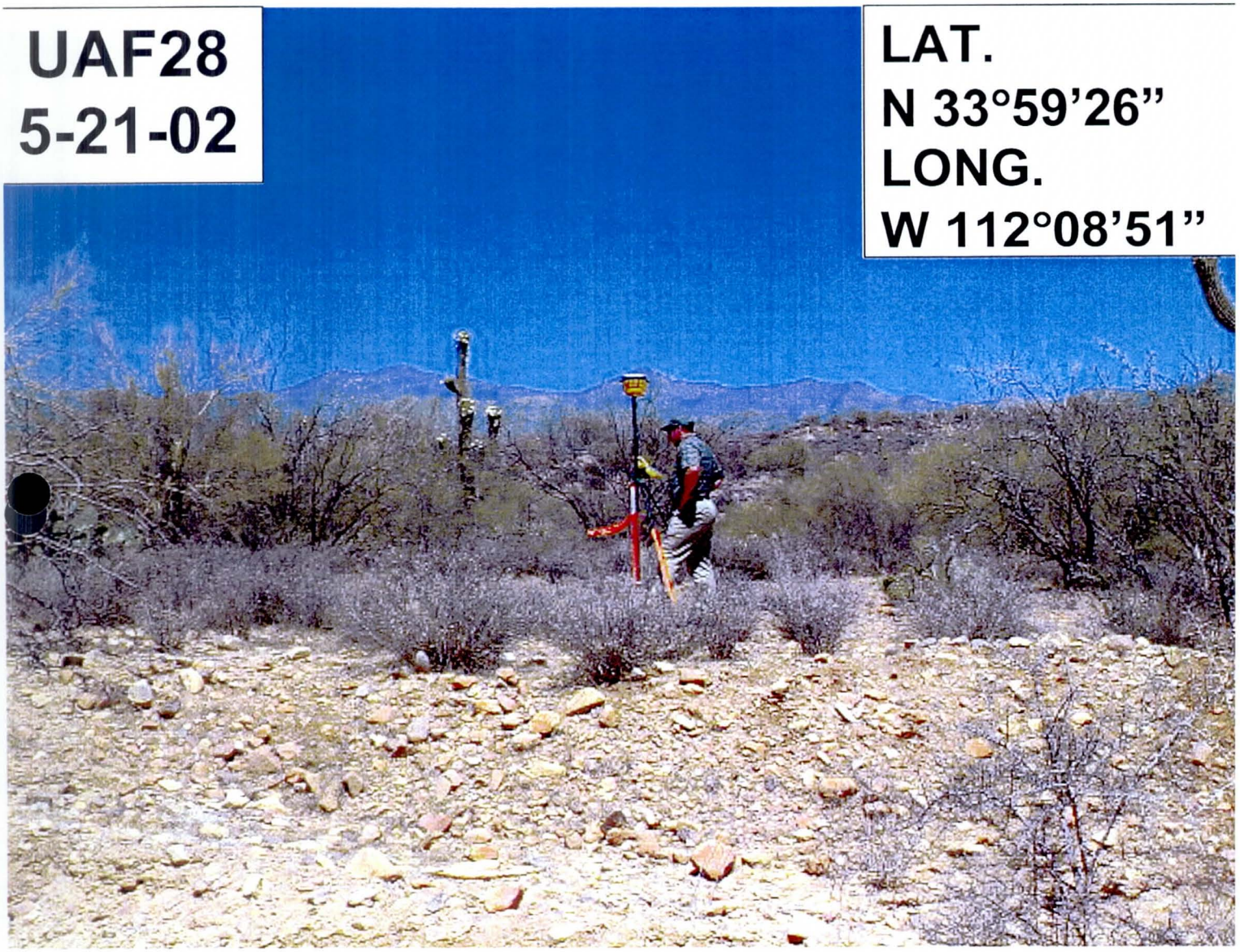
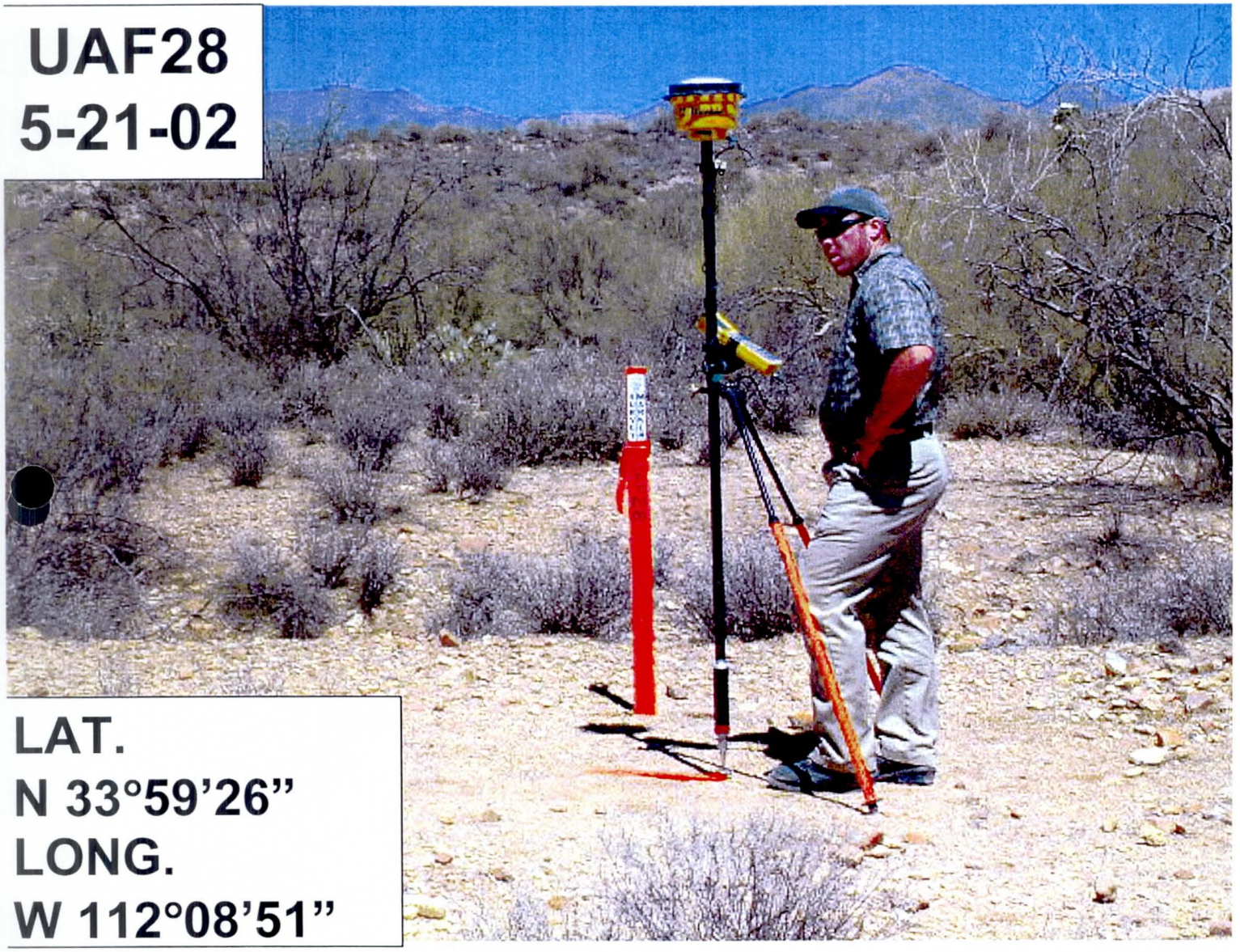
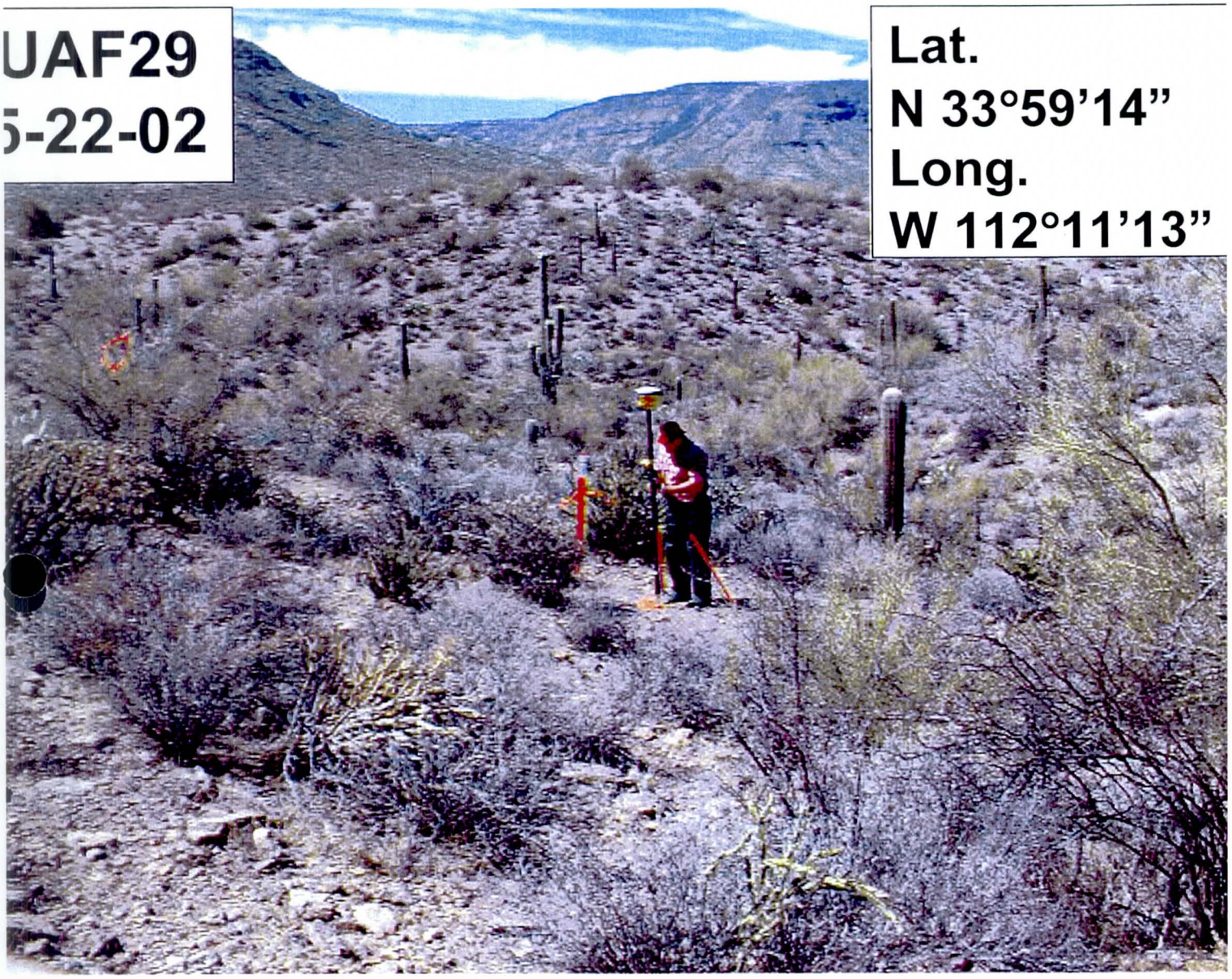



UAF28
5-21-02
LAT.
N 33°59'26"
LONG.
W 112°08'51"

UAF29
5-22-02

Lat.
N 33°59'14"
Long.
W 112°11'13'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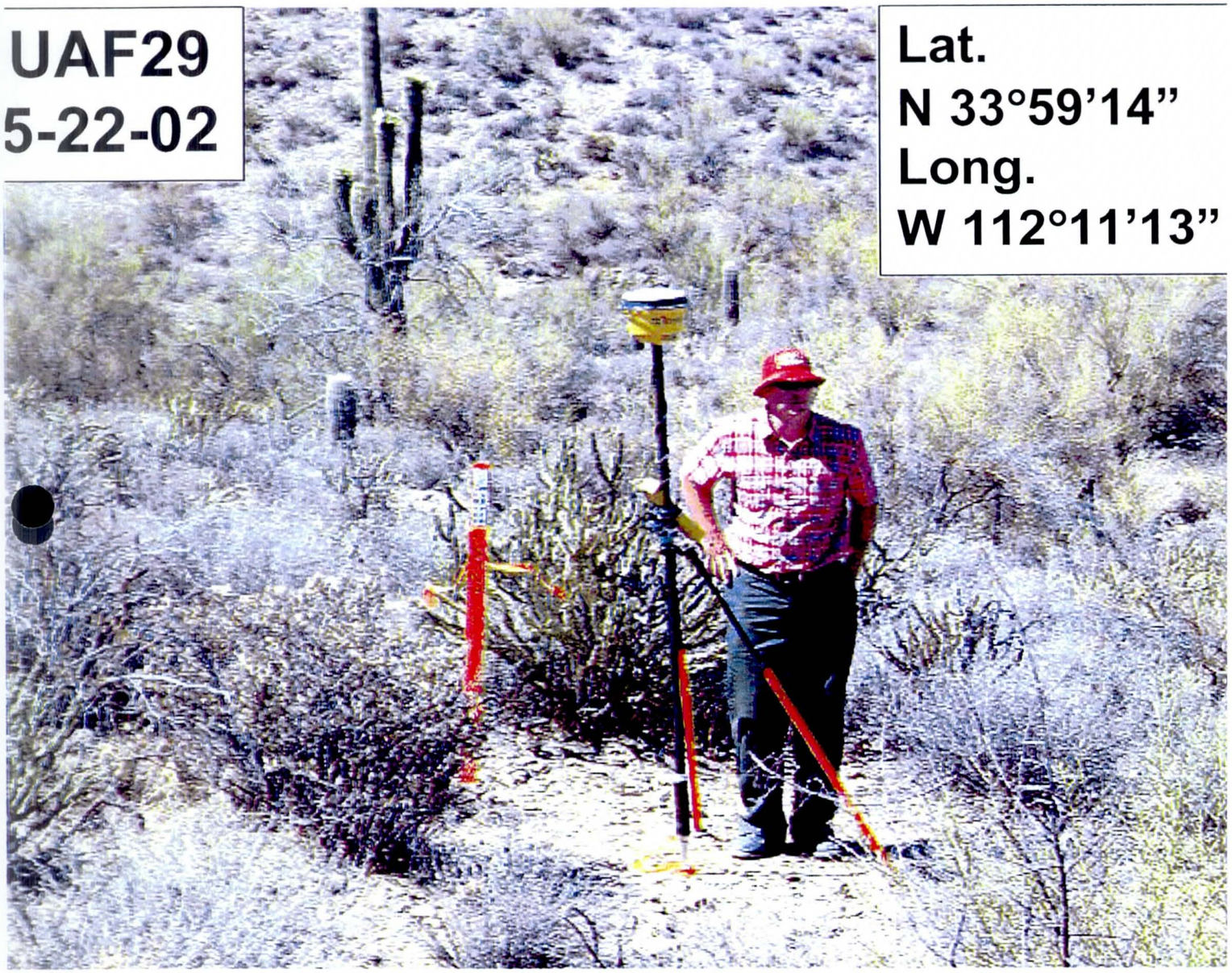
Long.
W 112°11'13"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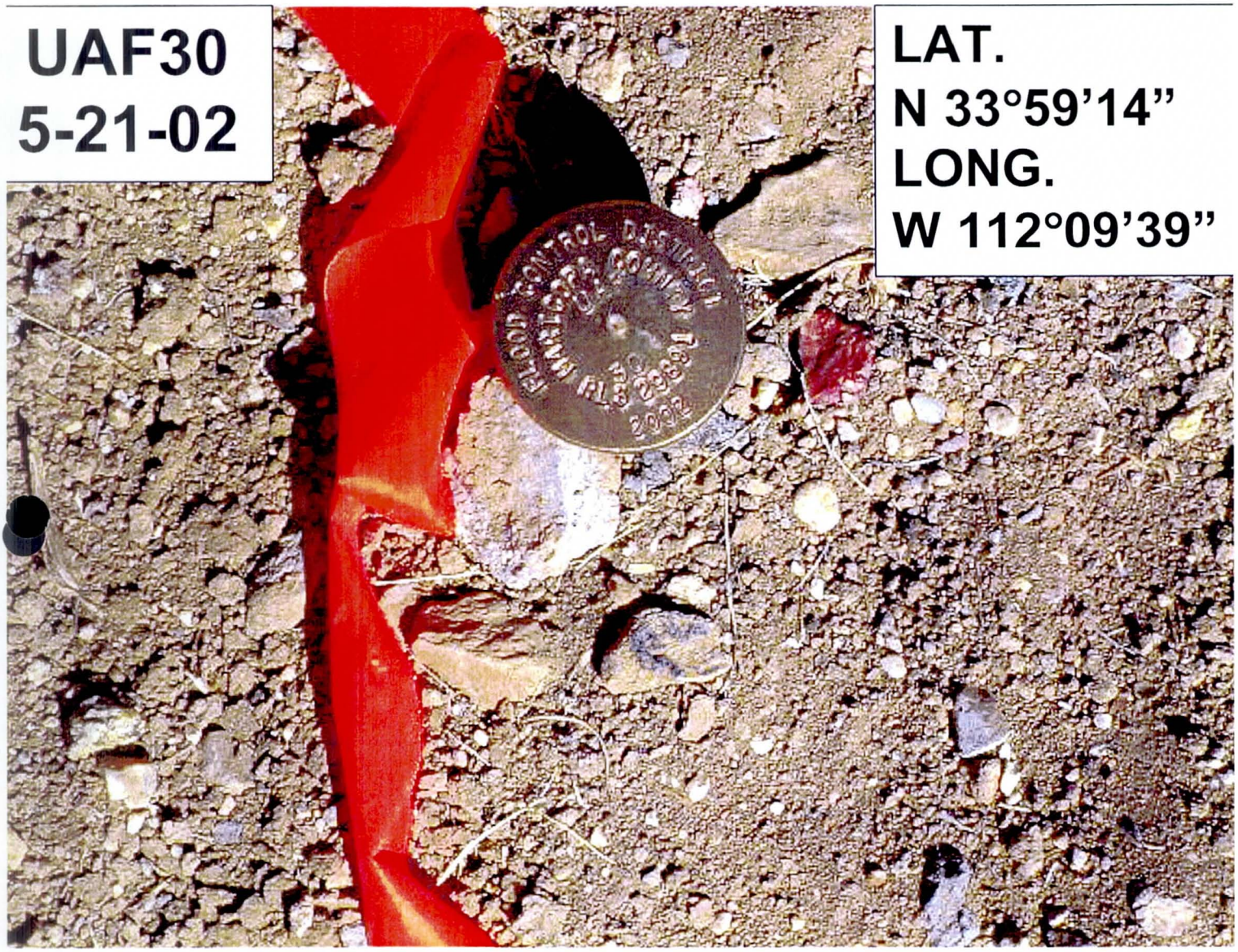
Long.
W 112°11'13"

UAF30
5-21-02



LAT.
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LONG.
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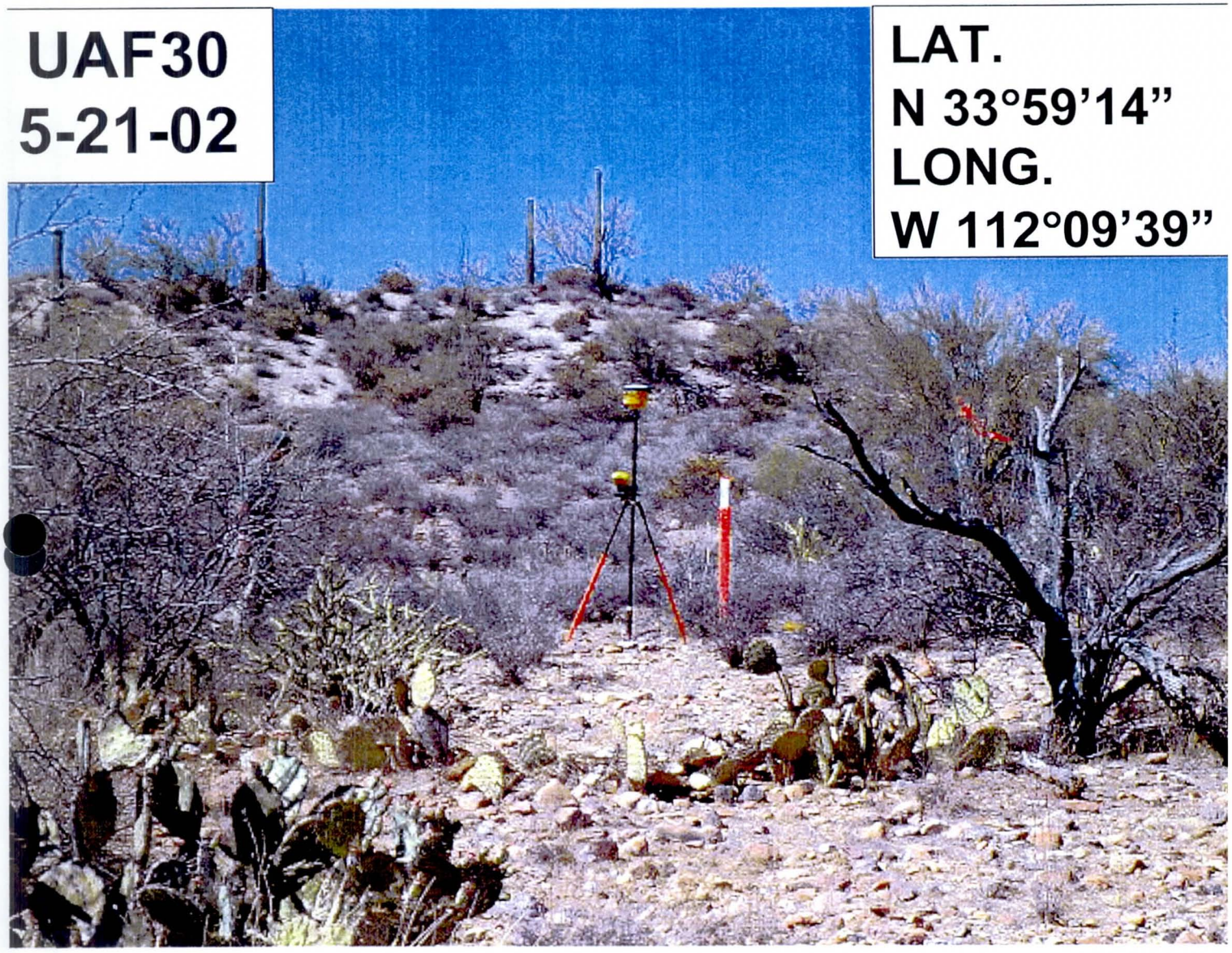
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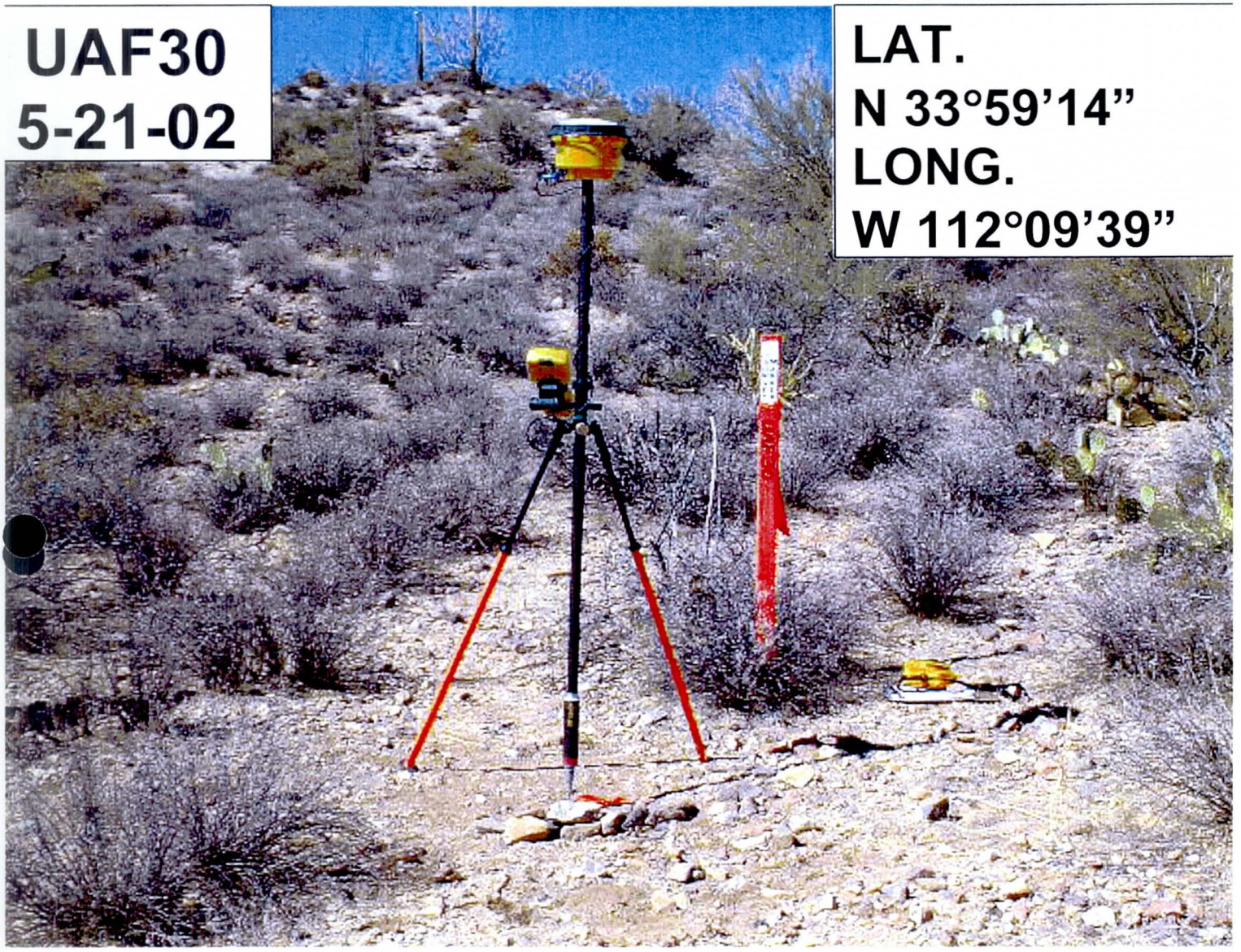
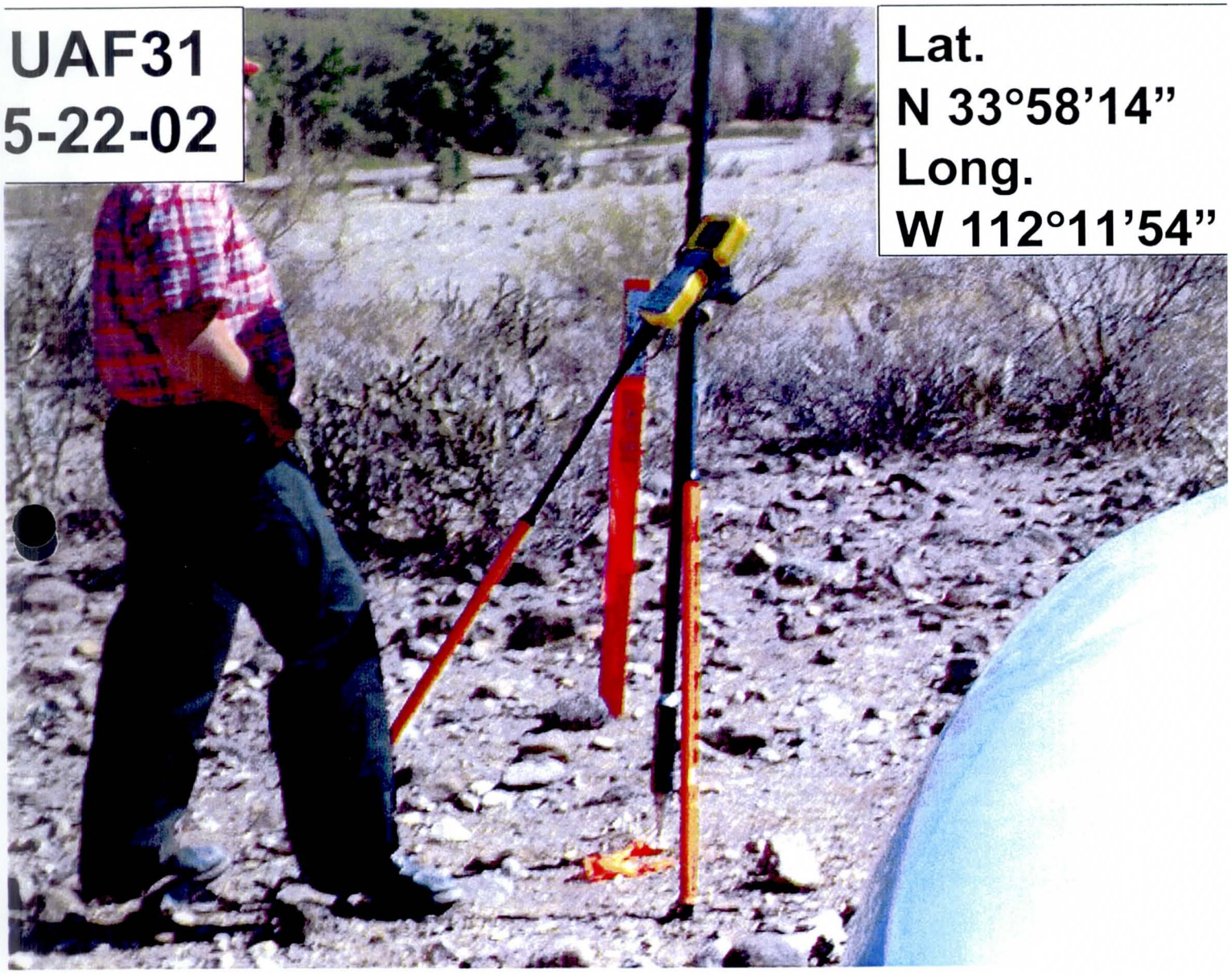
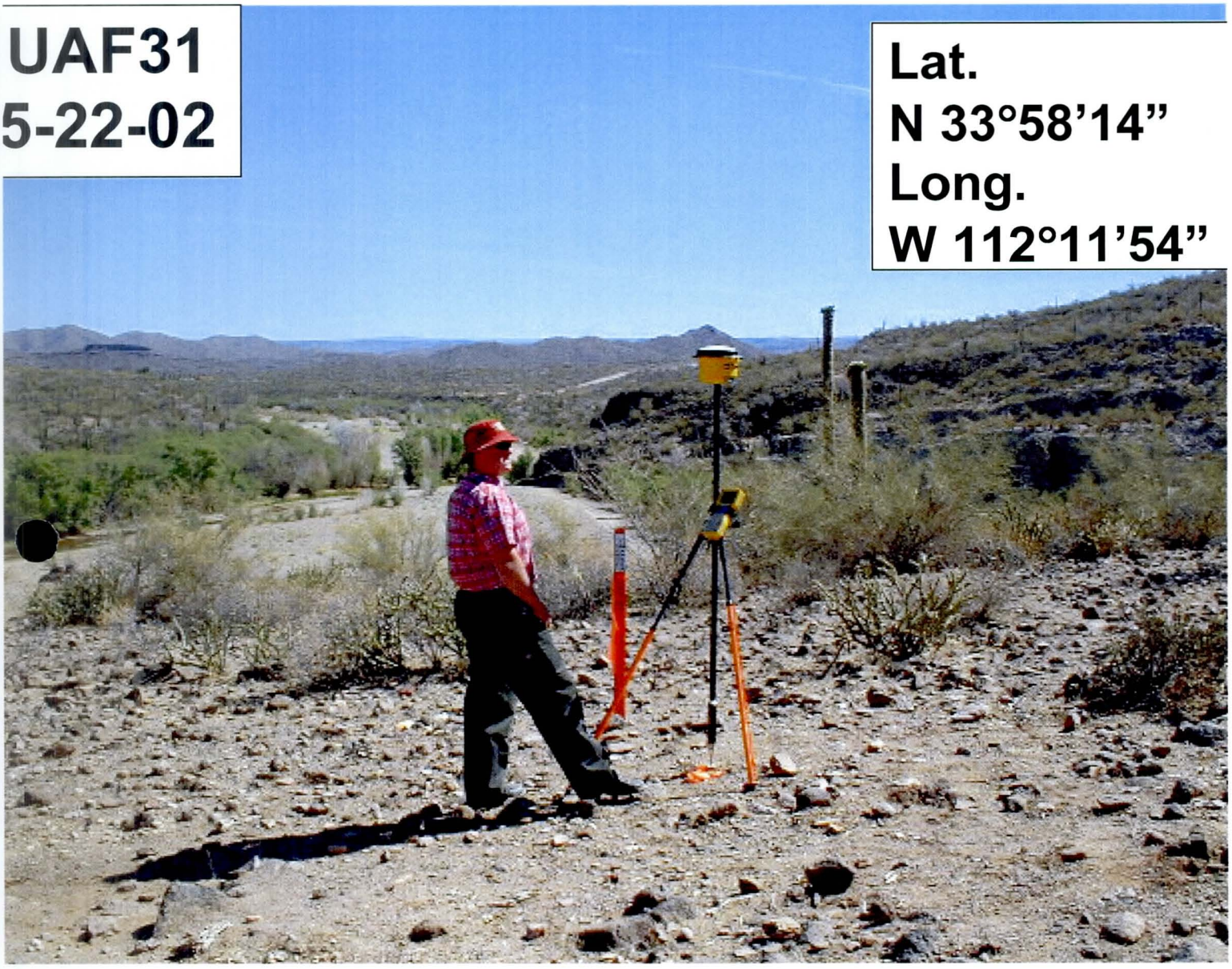
N 33°59'14"
LONG.
W 112°09'39"

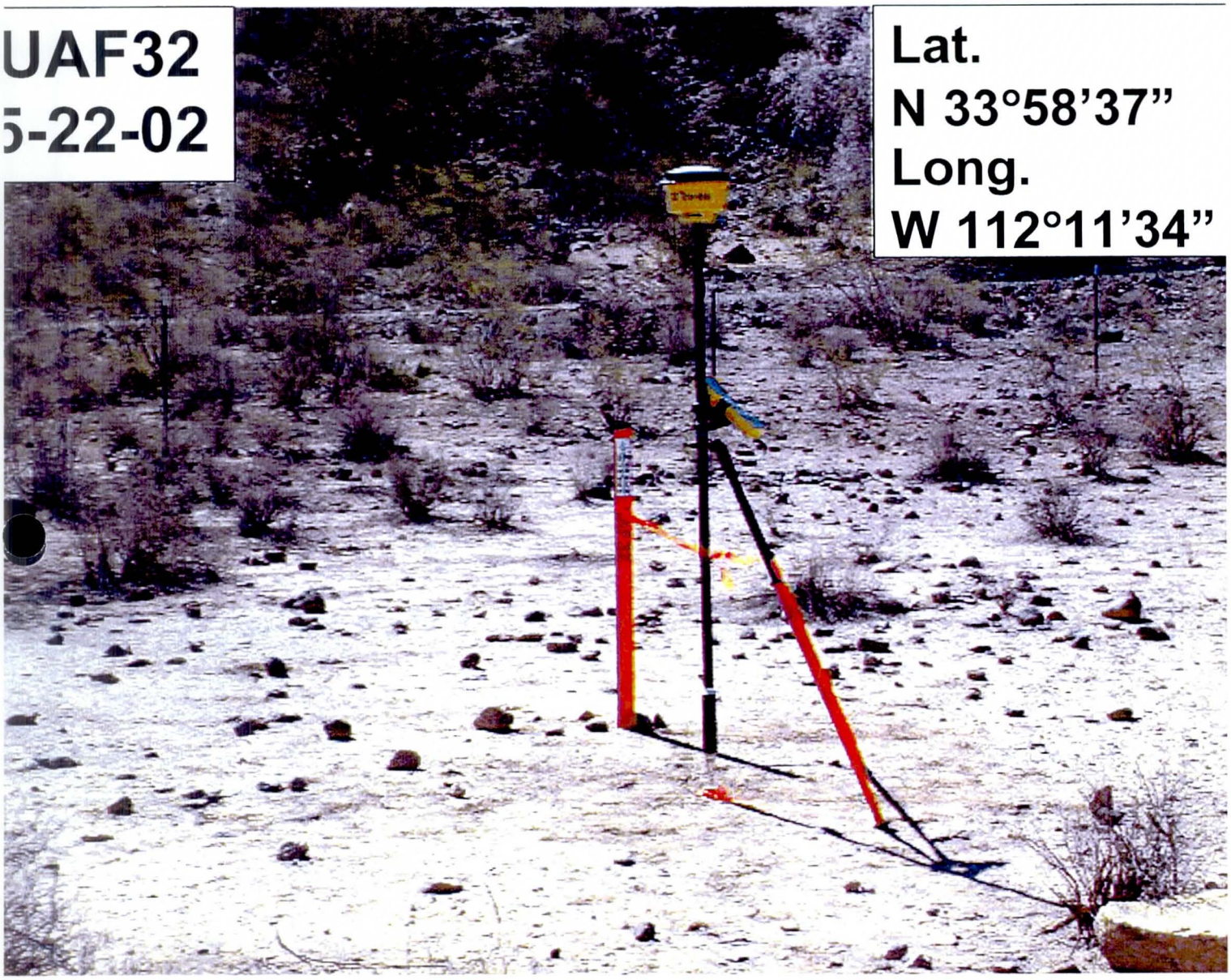

UAF30
5-21-02
LAT.
N 33°59'14"
LONG.
W 112°09'39"

Lat.
N 33°58'14"
Long.
W 112°11'54"

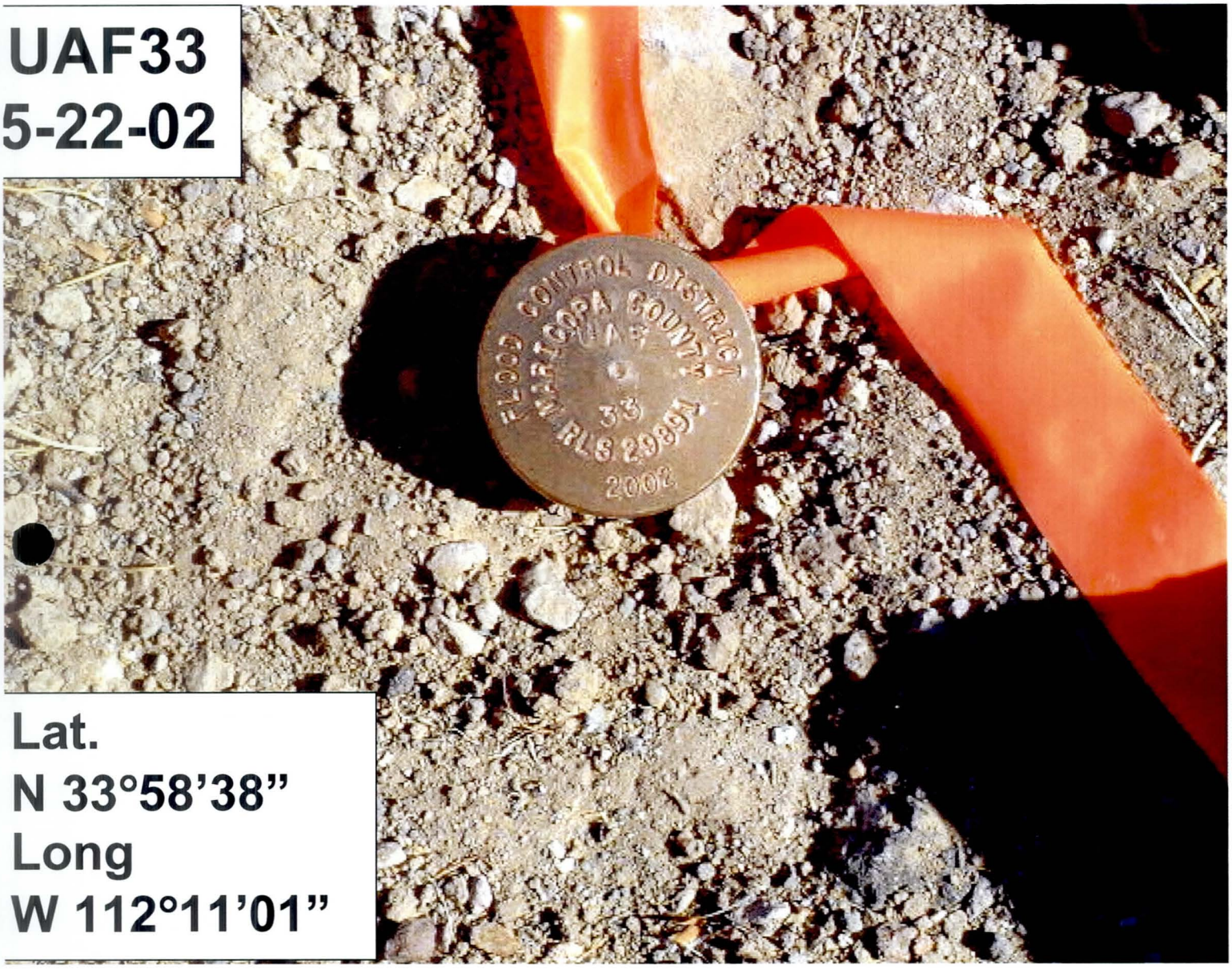

UAF31
5-22-02
Lat.
N 33°58'14"
Long.
W 112°11'54"

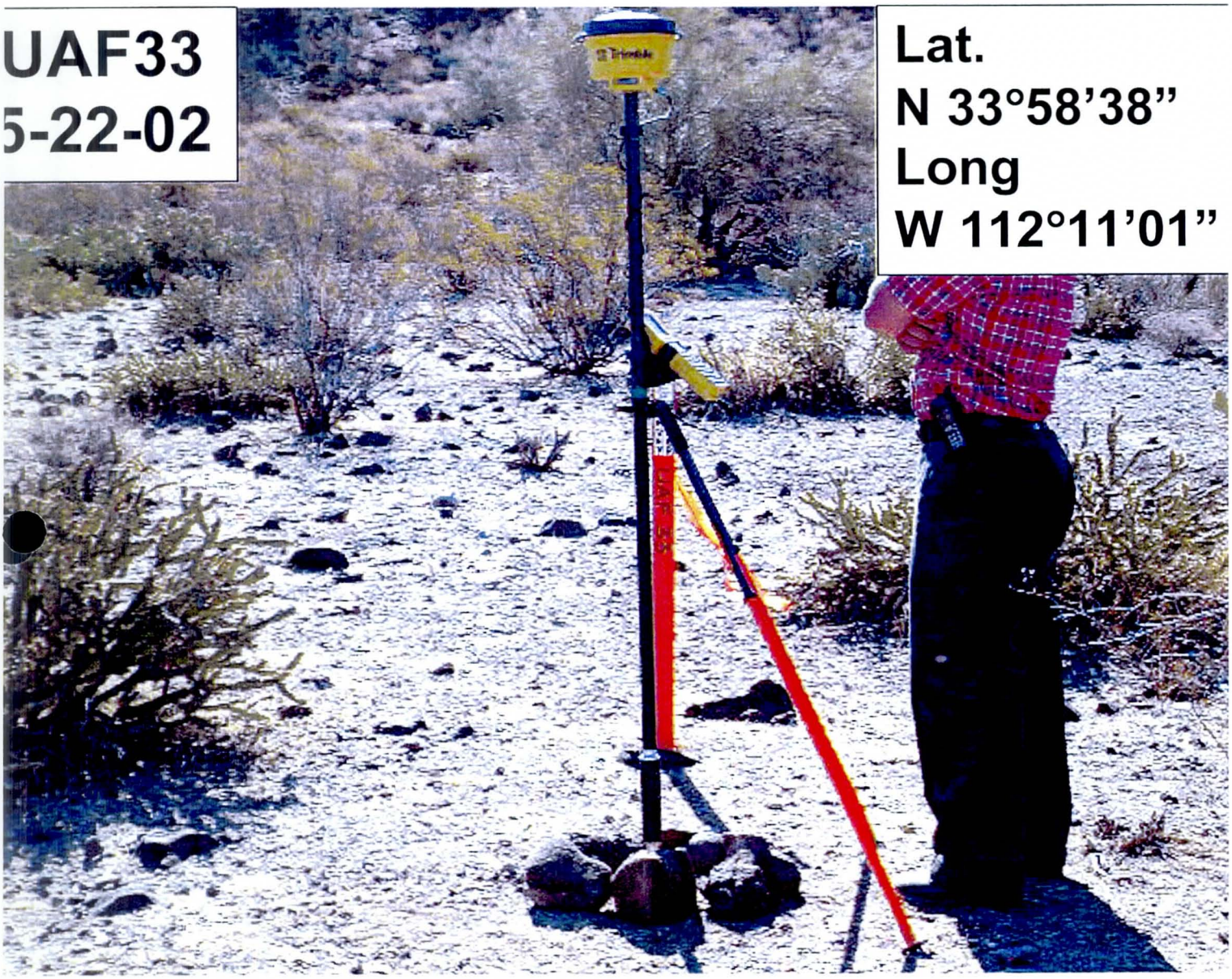

UAF31
5-22-02
Lat.
N 33°58'14"
Long.
W 112°11'54"

Lat.
N 33°58'37"
Long.
W 112°11'34"


UAF32
5-22-02
Lat.
N 33°58'37"
Long.
W 112°11'34"

UAF32
5-22-02
Lat.
N 33°58'37"
Long.
W 112°11'34"


UAF33
5-22-02
FLOOD CONTROL DISTRICT
MARICOPA COUNTY
UAF
33
RLS 29891
2002
Lat.
N 33°58'38"
Long
W 112°11'01"

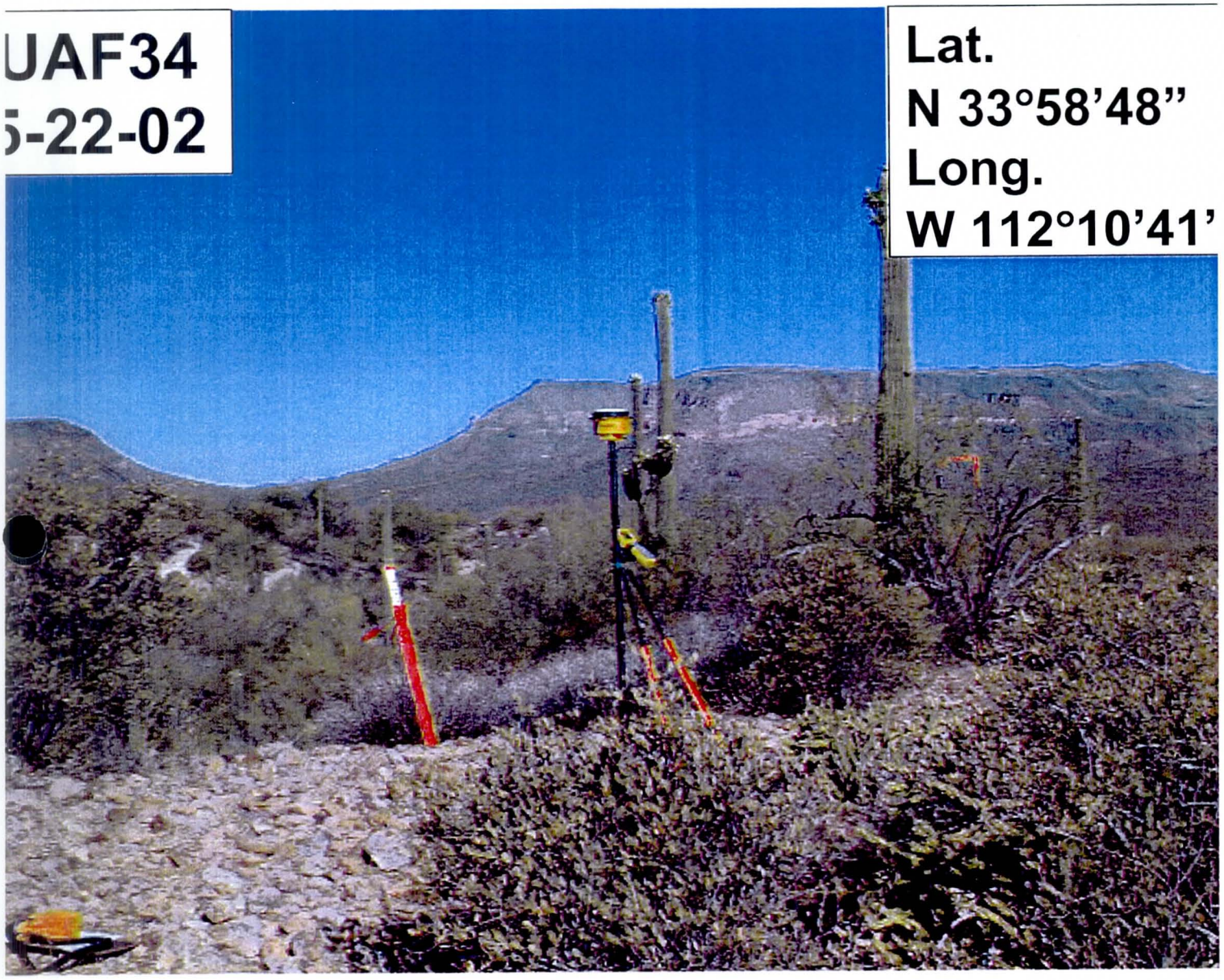

UAF33
5-22-02
Lat.
N 33°58'38"
Long
W 112°11'01"

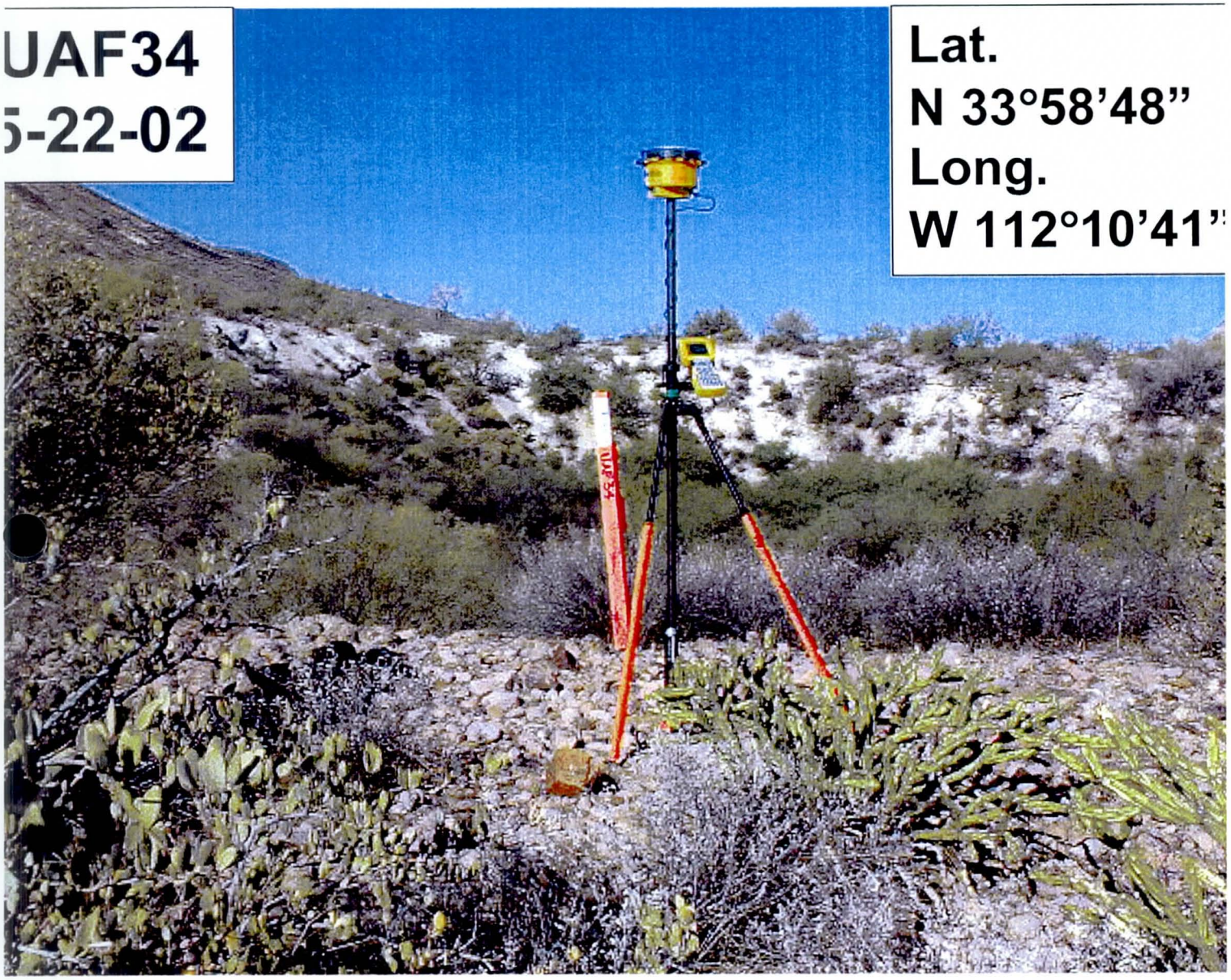
UAF33
5-22-02

Lat.
N 33°58'38"
Long
W 112°11'01"

UAF34
5-22-02

Lat.
N 33°58'48"
Long.
W 112°10'41"


UAF34
5-22-02
Lat.
N 33°58'48"
Long.
W 112°10'41'

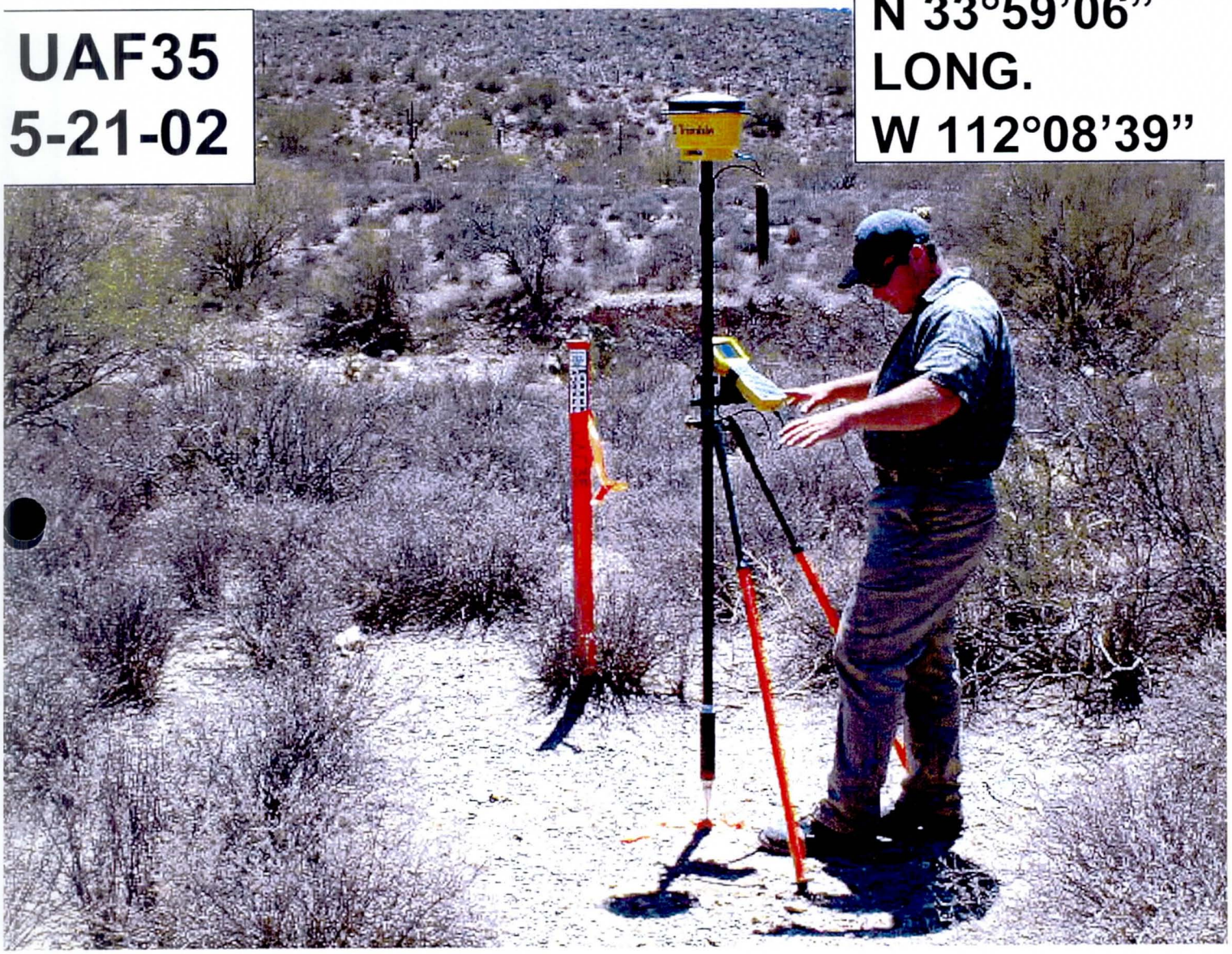

UAF34
5-22-02
Lat.
N 33°58'48"
Long.
W 112°10'41"
UAF34

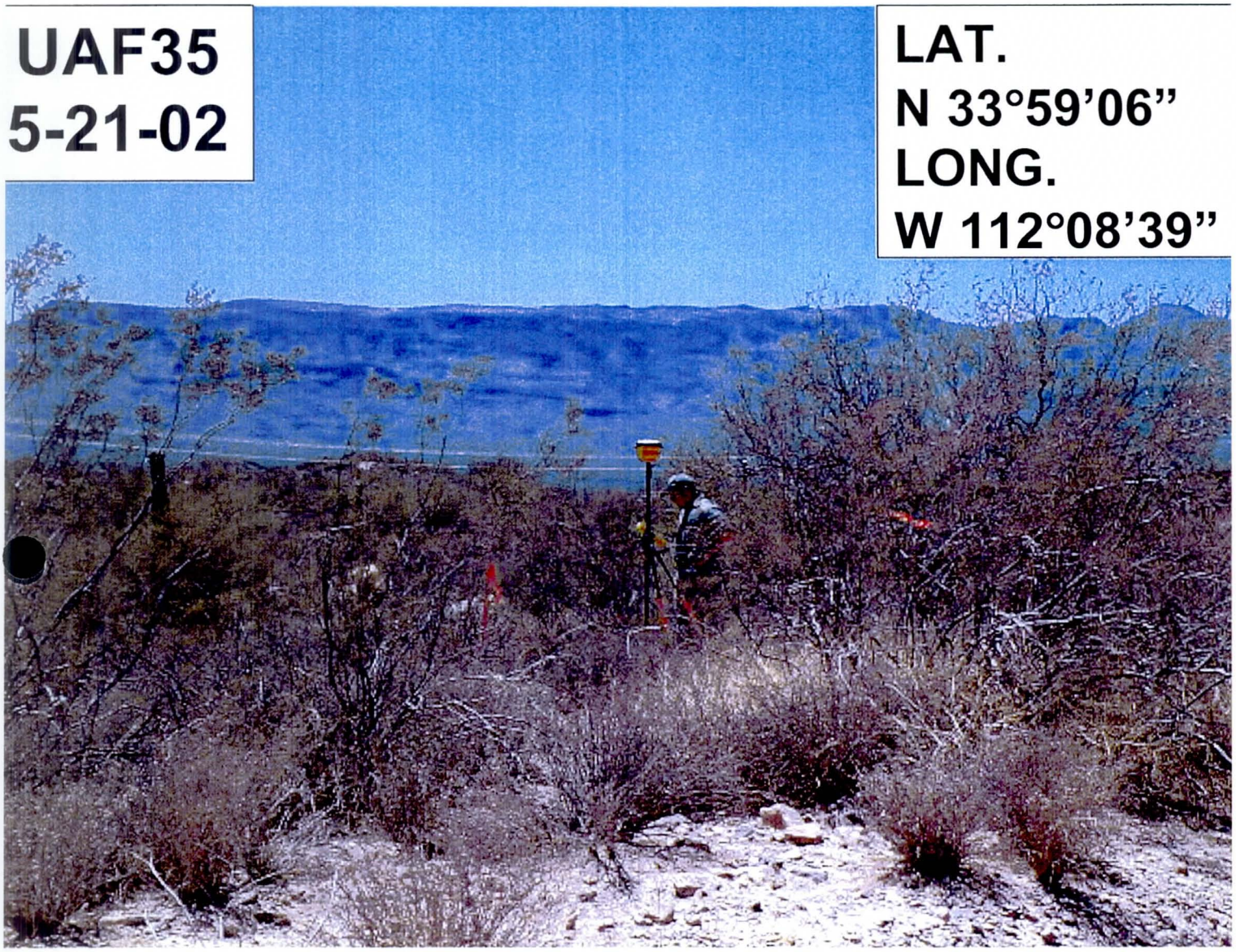
UAF35
5-21-02

LAT.
N 33°59'06"
LONG.
W 112°08'39"

UAF35
5-21-02

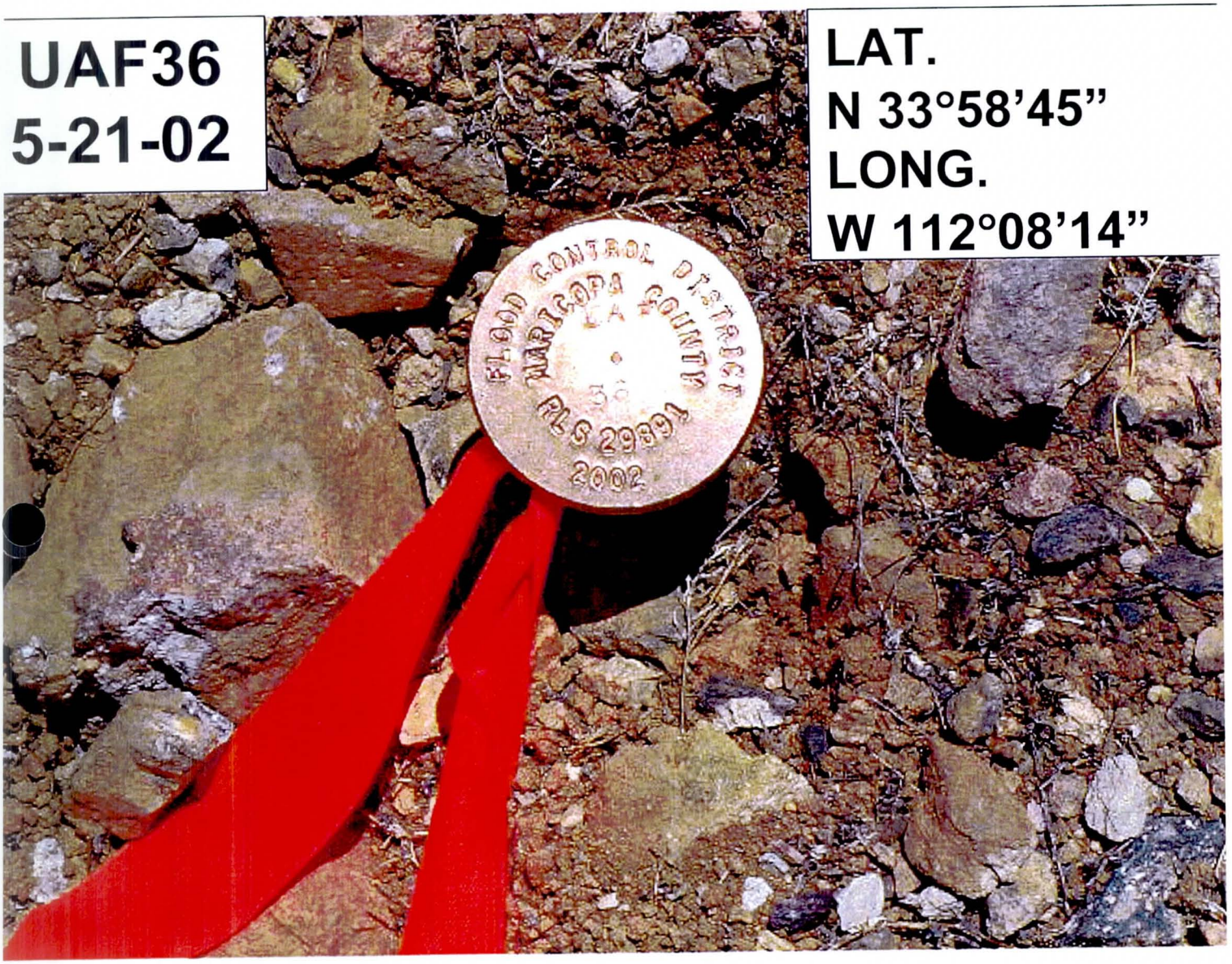
LAT.
N 33°59'06"
LONG.
W 112°08'39"

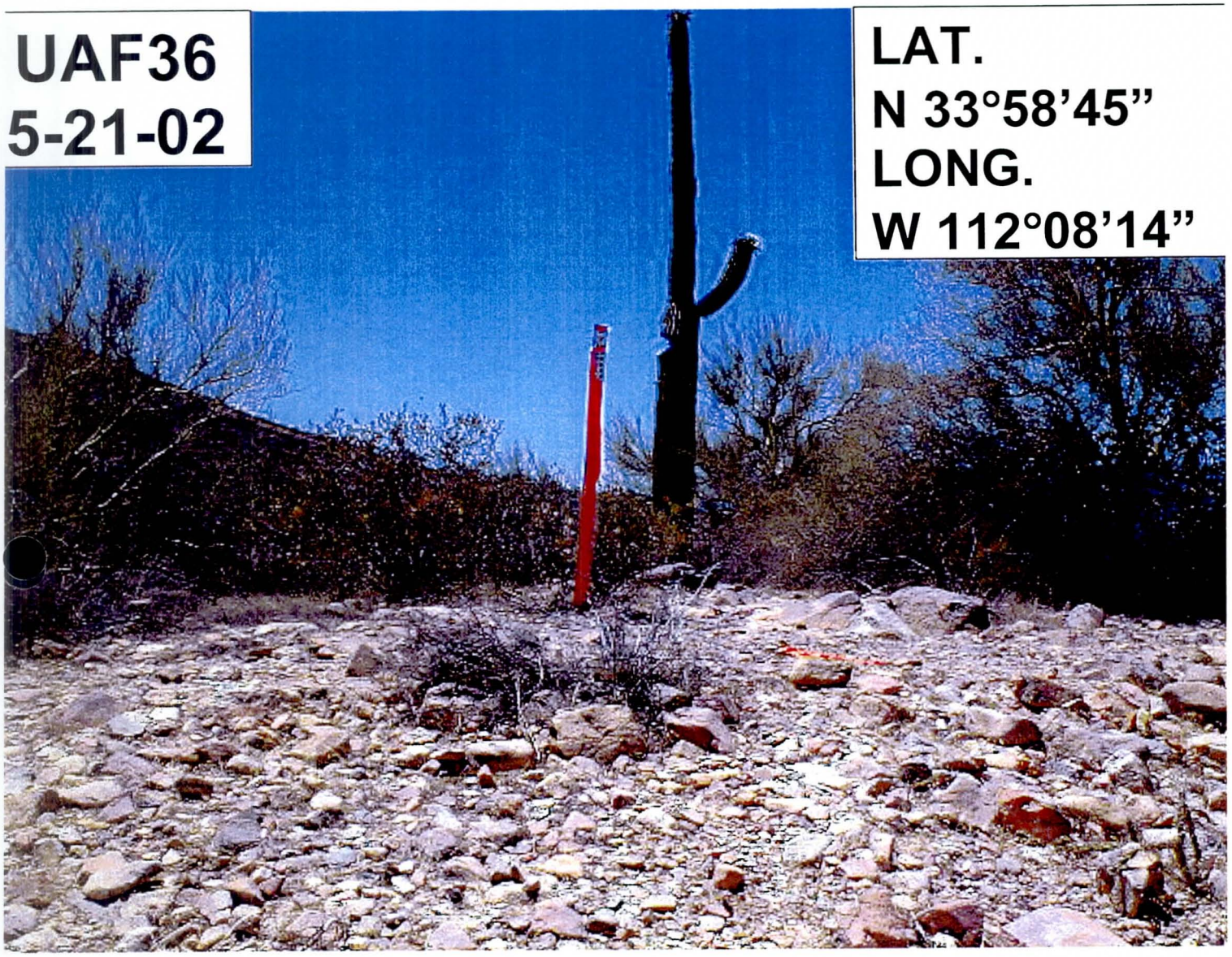



UAF35
5-21-02
LAT.
N 33°59'06"
LONG.
W 112°08'39"

UAF36
5-21-02

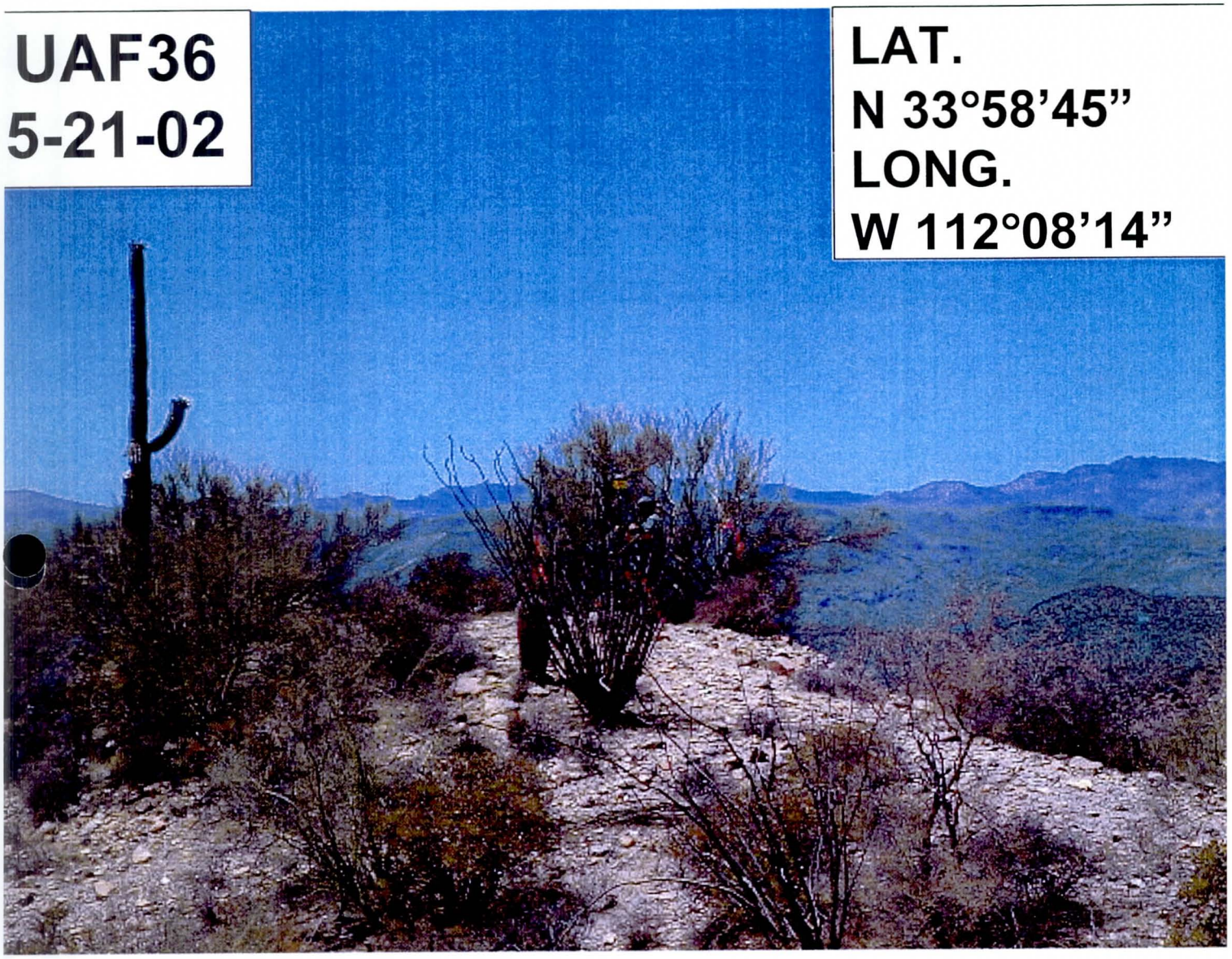
LAT.
N 33°58'45"
LONG.
W 112°08'14"




UAF36
5-21-02
LAT.
N 33°58'45"
LONG.
W 112°08'14"

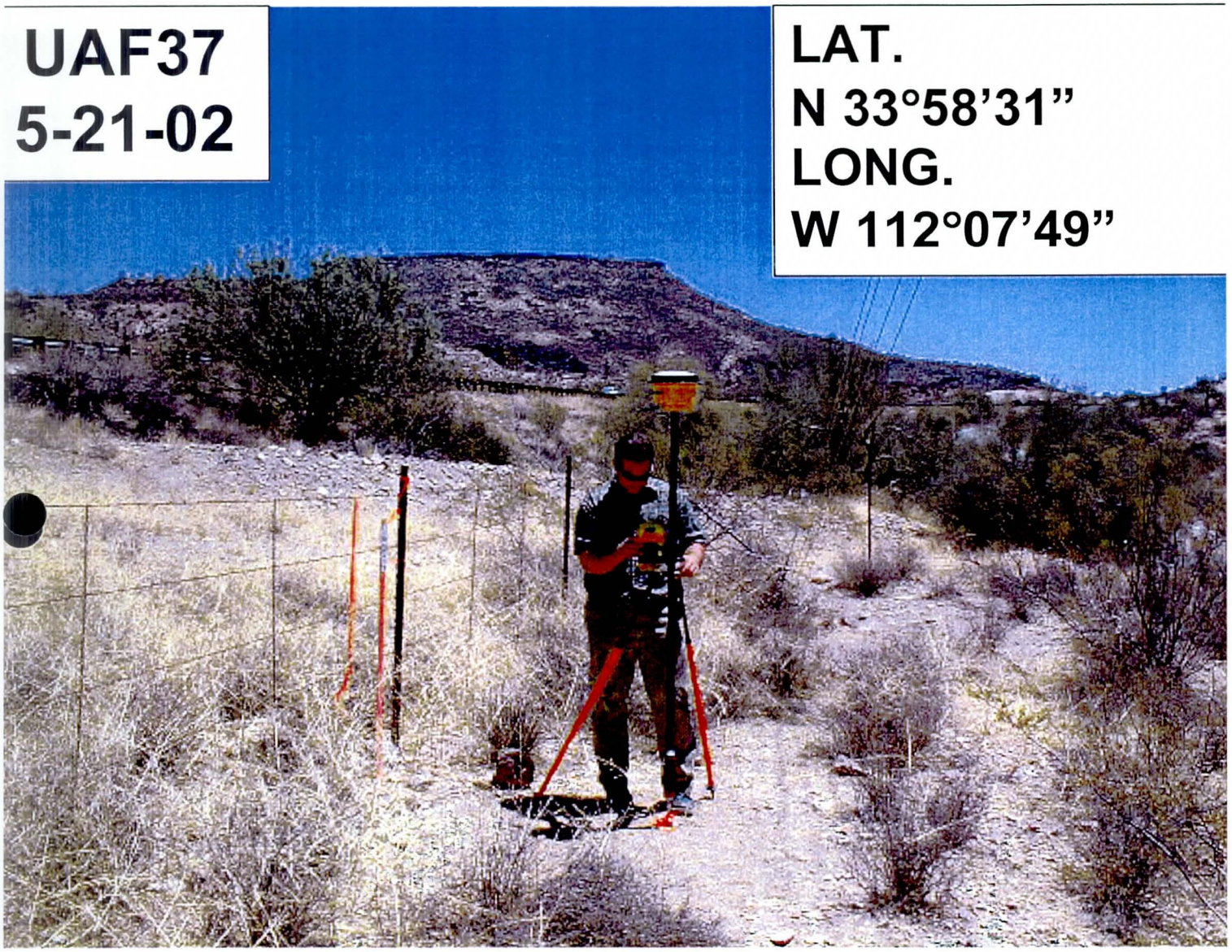
UAF36
5-21-02

LAT.
N 33°58'45"
LONG.
W 112°08'14"



UAF37
5-21-02

LAT.
N 33°58'31"
LONG.
W 112°07'49"



UAF37
5-21-02

LAT.
N 33°58'31"
LONG.
W 112°07'49"

45-100648.002 Upper Agua Fria
Verticle Verification
NAVD88

NAME	PHUBLISHED ELEVATION	MEASURED ELEVATION	DIFFERENCE	PHUBLISHED ORDER	STABILITY
ROCK	2185.4	2185.357	0.043	Second class 0	A most reliable
MOP	2065.5	2065.76	-0.26	Second class 0	C subject to surface n
MOP NO 1	2065.5	2065.708	-0.208	Second class 0	C subject to surface n
MOP NO 2	2065.3	2065.471	-0.171	Second class 0	C subject to surface n

The NGS Data Sheet

See file dsdata.txt for more information about the datasheet.

```
DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 6.59
1        National Geodetic Survey,   Retrieval Date = JUNE 25, 2002
 AJ3723 ***********************************************************************
 AJ3723  DESIGNATION -  1PD5
 AJ3723  PID         -  AJ3723
 AJ3723  STATE/COUNTY-  AZ/MARICOPA
 AJ3723  USGS QUAD   -  BLACK CANYON CITY (1969)
 AJ3723
 AJ3723                        *CURRENT SURVEY CONTROL
 AJ3723  ___________________________________________________________________
 AJ3723* NAD 83(1992)-  34 02 08.93532(N)    112 08 48.18990(W)     ADJUSTED
 AJ3723* NAVD 88     -       642.73   (meters)    2108.7    (feet)  GPS OBS
 AJ3723  ___________________________________________________________________
 AJ3723  X           -  -1,994,804.682 (meters)                     COMP
 AJ3723  Y           -  -4,901,142.925 (meters)                     COMP
 AJ3723  Z           -   3,550,083.304 (meters)                     COMP
 AJ3723  LAPLACE CORR-           4.27  (seconds)                    DEFLEC99
 AJ3723  ELLIP HEIGHT-         614.40  (meters)                     GPS OBS
 AJ3723  GEOID HEIGHT-         -28.26  (meters)                     GEOID99
 AJ3723
 AJ3723  HORZ ORDER  -  B
 AJ3723  ELLP ORDER  -  THIRD     CLASS II
 AJ3723
 AJ3723.The horizontal coordinates were established by GPS observations
 AJ3723.and adjusted by the National Geodetic Survey in April 2001.
 AJ3723
 AJ3723.The orthometric height was determined by GPS observations and a
 AJ3723.high-resolution geoid model using precise GPS observation and
 AJ3723.processing techniques.
 AJ3723
 AJ3723.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 AJ3723
 AJ3723.The Laplace correction was computed from DEFLEC99 derived deflections.
 AJ3723
 AJ3723.The ellipsoidal height was determined by GPS observations
 AJ3723.and is referenced to NAD 83.
 AJ3723
 AJ3723.The geoid height was determined by GEOID99.
 AJ3723
 AJ3723;                    North         East     Units   Scale      Converg.
 AJ3723;SPC AZ C     -   336,650.060   192,117.653   MT  0.99990556 -0 07 43.5
 AJ3723;UTM  12      - 3,766,720.072   394,144.751   MT  0.99973813 -0 38 30.8
 AJ3723
 AJ3723                         SUPERSEDED SURVEY CONTROL
 AJ3723
 AJ3723.No superseded survey control is available for this station.
 AJ3723
 AJ3723_MARKER: DD = SURVEY DISK
 AJ3723_SETTING: 66 = SET IN ROCK OUTCROP
 AJ3723_STAMPING: NOT STAMPED
 AJ3723_MARK LOGO: MCDOT
 AJ3723_MAGNETIC: N = NO MAGNETIC MATERIAL
 AJ3723_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
```

```
AJ3723+STABILITY: POSITION/ELEVATION WELL
AJ3723_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3723+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3723
AJ3723  HISTORY     - Date     Condition        Report By
AJ3723  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3723
AJ3723                          STATION DESCRIPTION
AJ3723
AJ3723'DESCRIBED BY MARICOPA CO DOT 1999 (CC)
AJ3723'THE STATION IS LOCATED WITHIN THE COUNTY OF MARICOPA, TOWNSHIP 08
AJ3723'NORTH, RANGE 02 EAST, SECTION 15
AJ3723'OWNERSHIP - ADOT RIGHT OF WAY
AJ3723'TO REACH THE STATION FROM THE JUNCTION OF I-17 AND ROCK SPRINGS ROAD,
AJ3723'(EXIT 242), DRIVE SOUTH ON I-17 FOR 2.5 MI (4.0 KM) TO A DIRT ROAD
AJ3723'TURN AROUND IN THE MIDDLE OF I-17 ON THE LEFT (JUST OF A LARGE HILL IN
AJ3723'THE MIDDLE OF THE HIGHWAY), THENCE TURN LEFT (EAST) INTO MEDIAN ON THE
AJ3723'TURN AROUND (BE VERY CAREFUL MERGE OFF THE HIGHWAY), PARK IN DIRT TURN
AJ3723'AROUND AREA AND STATION IS 350 FT (106.7 M) UPHILL TO THE MOUNTAIN
AJ3723'LEDGE, LOCATED BETWEEN I-17 SOUTHBOUND AND I-17 NORTHBOUND, TO THE
AJ3723'STATION AS DESCRIBED
AJ3723'MONUMENT DESCRIPTION - THE STATION IS MARKED BY A 3 1/4 INCH MARICOPA
AJ3723'COUNTY BRASS DISK, STAMPED 1PD5, SET IN A ROCK LEDGE, WITNESSED BY A
AJ3723'WHITE CARSONITE MARKER
AJ3723'STATION TIES
AJ3723'350 FT (106.7 M) NORTH OF DIRT TURN AROUND, BETWEEN THE NORTH AND
AJ3723'SOUTH BOUND LANES OF INTERSTATE 17 (BLACK CANYON HIGHWAY)
AJ3723'UNKNOWN DISTANCE TO CARSONITE MARKER
AJ3723'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3723'VISIT WWW.MCDOT.MARICOPA.GOV       SEARCH KEYWORD  GDACS

*** retrieval complete.
Elapsed Time = 00:00:02
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The NGS Data Sheet

See file dsdata.txt for more information about the datasheet.

```
DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 6.59
1        National Geodetic Survey,   Retrieval Date = JUNE 25, 2002
 AE4800 ***********************************************************************
 AE4800  DESIGNATION -  NR22
 AE4800  PID         -  AE4800
 AE4800  STATE/COUNTY-  AZ/MARICOPA
 AE4800  USGS QUAD   -  NEW RIVER (1981)
 AE4800
 AE4800                        *CURRENT SURVEY CONTROL
 AE4800  ___________________________________________________________________
 AE4800* NAD 83(1992)-  33 59 02.85279(N)    112 09 57.79142(W)     ADJUSTED
 AE4800* NAVD 88     -       597.66   (meters)    1960.8    (feet)  GPS OBS
 AE4800  ___________________________________________________________________
 AE4800  X           -  -1,997,654.298 (meters)                     COMP
 AE4800  Y           -  -4,903,404.955 (meters)                     COMP
 AE4800  Z           -   3,545,304.732 (meters)                     COMP
 AE4800  LAPLACE CORR-           4.27  (seconds)                    DEFLEC99
 AE4800  ELLIP HEIGHT-         569.05  (meters)                     GPS OBS
 AE4800  GEOID HEIGHT-         -28.54  (meters)                     GEOID99
 AE4800
 AE4800  HORZ ORDER  -  B
 AE4800  ELLP ORDER  -  THIRD     CLASS II
 AE4800
 AE4800.The horizontal coordinates were established by GPS observations
 AE4800.and adjusted by the National Geodetic Survey in April 2001.
 AE4800
 AE4800.The orthometric height was determined by GPS observations and a
 AE4800.high-resolution geoid model using precise GPS observation and
 AE4800.processing techniques.
 AE4800
 AE4800.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 AE4800
 AE4800.The Laplace correction was computed from DEFLEC99 derived deflections.
 AE4800
 AE4800.The ellipsoidal height was determined by GPS observations
 AE4800.and is referenced to NAD 83.
 AE4800
 AE4800.The geoid height was determined by GEOID99.
 AE4800
 AE4800;                    North         East     Units   Scale      Converg.
 AE4800;SPC AZ C     -   330,921.251   190,318.473   MT  0.99990654 -0 08 21.8
 AE4800;UTM  12      - 3,761,008.541   392,294.678   MT  0.99974300 -0 39 06.6
 AE4800
 AE4800:                Primary Azimuth Mark                     Grid Az
 AE4800:SPC AZ C     -  NR02                                     105 34 44.7
 AE4800:UTM  12      -  NR02                                     106 05 29.5
 AE4800
 AE4800|-------------------------------------------------------------------|
 AE4800| PID    Reference Object                     Distance      Geod. Az  |
 AE4800|                                                           dddmmss.s |
 AE4800| AE4804 NR02                                446.229 METERS 1052622.9 |
 AE4800|-------------------------------------------------------------------|
 AE4800
```

```
AE4800                          SUPERSEDED SURVEY CONTROL
AE4800
AE4800  NAD 83(1992)-  33 59 02.85285(N)    112 09 57.79198(W) AD(       ) 1
AE4800  NGVD 29     -       597.0    (m)         1959.     (f) GPS OBS
AE4800
AE4800.Superseded values are not recommended for survey control.
AE4800.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AE4800.See file dsdata.txt to determine how the superseded data were derived.
AE4800
AE4800_MARKER: I = METAL ROD
AE4800_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AE4800_STAMPING: NR-22
AE4800_MARK LOGO: MCDOT
AE4800_PROJECTION: PROJECTING 4 CENTIMETERS
AE4800_MAGNETIC: I = MARKER IS A STEEL ROD
AE4800_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AE4800+STABILITY: POSITION/ELEVATION WELL
AE4800_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AE4800+SATELLITE: SATELLITE OBSERVATIONS - May 05, 2000
AE4800_ROD/PIPE-DEPTH: 2.1  meters
AE4800_SLEEVE-DEPTH  : .5 meters
AE4800
AE4800  HISTORY     - Date     Condition        Report By
AE4800  HISTORY     - 1996     MONUMENTED       ATEAM
AE4800  HISTORY     - 20000505 GOOD             MCDOT
AE4800
AE4800                          STATION DESCRIPTION
AE4800
AE4800'DESCRIBED BY A TEAM PA INC 1996 (JJR)
AE4800'TO REACH STATION FROM EXIT 236 (TABLE MESA ROAD) OF INTERSTATE 17,
AE4800'TRAVEL TO FRONTAGE ROAD LEADING NORTH ALONG INTERSTATE HIGHWAY. TRAVEL
AE4800'NORTH 0.5 MI (0.80 KM) TO END OF PAVEMENT. CONTINUE ALONG GRADED
AE4800'GRAVEL ROAD 1.2 MI (1.93 KM) TO FORK IN ROAD. TAKE LEFT (SOUTHERN)
AE4800'FORK AND CONTINUE FOR 1.5 MI (2.41 KM) TO THE STATION ON THE RIGHT
AE4800'(NORTH). STATION MARK IS A 9/16 STAINLESS STEEL ROD IN A HANDWELL
AE4800'INCASED IN CONCRETE, STAMPED NR-22 ON RIM OF HANDWELL. STATION IS 45
AE4800'FT (13.72 M) NORTH OF GRADED ROAD (TABLE MESA RD), 7 FT (2.13 M) SOUTH
AE4800'FROM EDGE OF DIRT ROAD TRAVELING NORTHEAST, APPROX. 125 FT (38.10 M)
AE4800'EAST OF INTERSECTION OF THE PREVIOUSLY DESCRIBED ROADS AND APPROX. 300
AE4800'FT (91.44 M) WEST OF UNNAMED WASH.
AE4800
AE4800                          STATION RECOVERY (2000)
AE4800
AE4800'RECOVERY NOTE BY MARICOPA CO DOT 2000 (DC)
AE4800'RECOVERED AS DESCRIBED.

*** retrieval complete.
Elapsed Time = 00:00:02
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The NGS Data Sheet

See file dsdata.txt for more information about the datasheet.

```
DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 6.59
1        National Geodetic Survey,   Retrieval Date = JUNE 25, 2002
 AJ3744 ***********************************************************************
 AJ3744  DESIGNATION -  1NF2
 AJ3744  PID         -  AJ3744
 AJ3744  STATE/COUNTY-  AZ/MARICOPA
 AJ3744  USGS QUAD   -  DAISY MOUNTAIN (1964)
 AJ3744
 AJ3744                        *CURRENT SURVEY CONTROL
 AJ3744  ___________________________________________________________________
 AJ3744* NAD 83(1992)-  33 55 48.58449(N)    112 04 23.43170(W)     ADJUSTED
 AJ3744* NAVD 88     -       694.61   (meters)    2278.9    (feet)  GPS OBS
 AJ3744  ___________________________________________________________________
 AJ3744  X           -  -1,990,989.952 (meters)                     COMP
 AJ3744  Y           -  -4,909,810.022 (meters)                     COMP
 AJ3744  Z           -   3,540,393.563 (meters)                     COMP
 AJ3744  LAPLACE CORR-           5.16  (seconds)                   DEFLEC99
 AJ3744  ELLIP HEIGHT-         666.07  (meters)                     GPS OBS
 AJ3744  GEOID HEIGHT-         -28.48  (meters)                     GEOID99
 AJ3744
 AJ3744  HORZ ORDER  -  B
 AJ3744  ELLP ORDER  -  THIRD     CLASS II
 AJ3744
 AJ3744.The horizontal coordinates were established by GPS observations
 AJ3744.and adjusted by the National Geodetic Survey in April 2001.
 AJ3744
 AJ3744.The orthometric height was determined by GPS observations and a
 AJ3744.high-resolution geoid model using precise GPS observation and
 AJ3744.processing techniques.
 AJ3744
 AJ3744.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 AJ3744
 AJ3744.The Laplace correction was computed from DEFLEC99 derived deflections.
 AJ3744
 AJ3744.The ellipsoidal height was determined by GPS observations
 AJ3744.and is referenced to NAD 83.
 AJ3744
 AJ3744.The geoid height was determined by GEOID99.
 AJ3744
 AJ3744;                    North         East     Units   Scale      Converg.
 AJ3744;SPC AZ C     -   324,919.142   198,890.586   MT  0.99990258 -0 05 14.5
 AJ3744;UTM  12      - 3,754,931.107   400,811.337   MT  0.99972128 -0 35 56.7
 AJ3744
 AJ3744                         SUPERSEDED SURVEY CONTROL
 AJ3744
 AJ3744.No superseded survey control is available for this station.
 AJ3744
 AJ3744_MARKER: DD = SURVEY DISK
 AJ3744_SETTING: 80 = SET IN A BOULDER
 AJ3744_MARK LOGO: MCDOT
 AJ3744_MAGNETIC: N = NO MAGNETIC MATERIAL
 AJ3744_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
 AJ3744+STABILITY: SURFACE MOTION
```

```
AJ3744_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3744+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3744
AJ3744  HISTORY     - Date     Condition        Report By
AJ3744  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3744
AJ3744                          STATION DESCRIPTION
AJ3744
AJ3744'DESCRIBED BY MARICOPA CO DOT 1999 (CC)
AJ3744'THE STATION IS LOCATED WITHIN THE COUNTY OF MARICOPA, TOWNSHIP 07
AJ3744'NORTH, RANGE 03 EAST, SECTION 20
AJ3744'OWNERSHIP - PRIVATE
AJ3744'TO REACH THE STATION FROM THE JUNCTION OF I-17 AND NEW RIVER ROAD,
AJ3744'(EXIT 232) DRIVE EAST ON NEW RIVER ROAD FOR 3.6 MI (5.8 KM) TO FIG
AJ3744'SPRINGS ROAD THENCE, TURN LEFT (NORTHEAST) ONTO FIG SPRINGS ROAD AND
AJ3744'DRIVE 1.4 MI (2.3 KM) TO CENTRAL AVENUE THENCE, CONTINUE AHEAD (EAST)
AJ3744'ON FIG SPRINGS ROAD FOR 400 FEET (121.9 M) PARK AND WALK NORTH 200 FT
AJ3744'(60 M) TO THE STATION UP THE HILL AS DESCRIBED
AJ3744'MONUMENT DESCRIPTION - THE STATION IS MARKED BY A 3 1/4 INCH MARICOPA
AJ3744'COUNTY BRASS DISK, STAMPED 1NF2, SET IN A BOULDER, WITNESSED BY A
AJ3744'WHITE CARSONITE MARKER
AJ3744'STATION TIES
AJ3744'2.4 FEET (0.7 M) WEST OF WHITE CARSONITE MARKER
AJ3744'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3744'VISIT WWW.MCDOT.MARICOPA.GOV       SEARCH KEYWORD  GDACS

*** retrieval complete.
Elapsed Time = 00:00:03
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The NGS Data Sheet

See file dsdata.txt for more information about the datasheet.

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DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 6.59
1        National Geodetic Survey,   Retrieval Date = JUNE  4, 2002
 DV0164 ***********************************************************************
 DV0164  DESIGNATION -  MOP
 DV0164  PID         -  DV0164
 DV0164  STATE/COUNTY-  AZ/MARICOPA
 DV0164  USGS QUAD   -  NEW RIVER (1981)
 DV0164
 DV0164                         *CURRENT SURVEY CONTROL
 DV0164  ___________________________________________________________________
 DV0164* NAD 83(1992)-  33 59 54.94281(N)    112 08 14.90386(W)     ADJUSTED
 DV0164* NAVD 88     -       629.58   (+/-2cm)    2065.5    (feet)  VERTCON
 DV0164  ___________________________________________________________________
 DV0164  LAPLACE CORR-           5.05  (seconds)                   DEFLEC99
 DV0164  GEOID HEIGHT-         -28.40  (meters)                    GEOID99
 DV0164
 DV0164  HORZ ORDER  -  THIRD
 DV0164  VERT ORDER  -  SECOND    CLASS 0 (See Below)
 DV0164
 DV0164.The horizontal coordinates were established by classical geodetic methods
 DV0164.and adjusted by the National Geodetic Survey in August 1993.
 DV0164
 DV0164.The NAVD 88 height was computed by applying the VERTCON shift value to
 DV0164.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)
 DV0164.The vertical order pertains to the superseded datum.
 DV0164
 DV0164.The Laplace correction was computed from DEFLEC99 derived deflections.
 DV0164
 DV0164.The geoid height was determined by GEOID99.
 DV0164
 DV0164;                   North         East     Units   Scale      Converg.
 DV0164;SPC AZ C     -   332,520.022   192,962.512   MT  0.99990513 -0 07 24.5
 DV0164;UTM  12      - 3,762,583.334   394,952.471   MT  0.99973603 -0 38 10.0
 DV0164
 DV0164:                Primary Azimuth Mark                     Grid Az
 DV0164:SPC AZ C     -  CARL                                     173 16 58.4
 DV0164:UTM  12      -  CARL                                     173 47 43.9
 DV0164
 DV0164|-------------------------------------------------------------------|
 DV0164| PID    Reference Object                    Distance      Geod. Az  |
 DV0164|                                                          dddmmss.s |
 DV0164| DV0165 MOP RM 2                            10.830 METERS 10344     |
 DV0164| DV1999 CARL                               APPROX. 3.1 KM 1730933.9 |
 DV0164| DV0166 MOP RM 1                            10.251 METERS 34633     |
 DV0164|-------------------------------------------------------------------|
 DV0164
 DV0164                          SUPERSEDED SURVEY CONTROL
 DV0164
 DV0164  NAD 83(1986)-  33 59 54.93747(N)    112 08 14.90688(W) AD(       ) 3
 DV0164  NAD 27      -  33 59 54.81100(N)    112 08 12.33120(W) AD(       ) 3
 DV0164  NGVD 29     -       628.971  (m)         2063.55    (f) ADJ UNCH    2 0
 DV0164
 DV0164.Superseded values are not recommended for survey control.
```

```
DV0164.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
DV0164.See file dsdata.txt to determine how the superseded data were derived.
DV0164
DV0164_MARKER: DS = TRIANGULATION STATION DISK
DV0164_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
DV0164_STAMPING: MOP 1958
DV0164_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
DV0164+STABILITY: SURFACE MOTION
DV0164
DV0164  HISTORY      - Date     Condition        Report By
DV0164  HISTORY      - 1959     MONUMENTED       CGS
DV0164  HISTORY      - 1959     GOOD             NGS
DV0164
DV0164                           STATION DESCRIPTION
DV0164
DV0164'DESCRIBED BY COAST AND GEODETIC SURVEY 1959 (RCM)
DV0164'THE STATION IS LOCATED ON THE EAST SIDE OF ARIZONA STATE HIGHWAY
DV0164'69, ABOUT 5 MILES SOUTH OF BLACK CANYON AND 0.5 MILE SOUTH OF
DV0164'THE BRIDGE OVER MOORE GULCH.
DV0164'
DV0164'TO REACH THE STATION FROM THE POST OFFICE AT BLACK CANYON,
DV0164'GO SOUTHWARD ON ARIZONA STATE HIGHWAY 69 FOR 5.1 MILES TO A
DV0164'METAL GATE AT THE SOUTH END OF A HIGHWAY CUT.  TURN LEFT OFF
DV0164'THE PAVEMENT AND LEFT AT THE GATE, FOLLOWING THE FENCE
DV0164'NORTH TO THE 7TH FENCEPOST NORTH OF THE GATE AND THE STATION.
DV0164'
DV0164'THE STATION MARK IS A STANDARD DISK STAMPED MOP 1958, SET IN
DV0164'THE TOP OF A CONCRETE CYLINDER THAT PROJECTS 6 INCHES.  IT IS
DV0164'ABOUT 150 FEET EAST OF ARIZONA STATE HIGHWAY 69, 4.9 FEET
DV0164'SOUTHWEST OF A WITNESS POST AND 4.5 FEET WEST OF A WIRE FENCE.
DV0164'
DV0164'R.M. 1 IS A STANDARD DISK STAMPED MOP 1958, SET IN THE TOP OF
DV0164'A CONCRETE CYLINDER THAT PROJECTS 5 INCHES.  IT IS 30.8 FEET
DV0164'NORTH OF THE WITNESS POST AND 2 FEET WEST OF THE FENCE.
DV0164'
DV0164'R.M. 2 IS A STANDARD DISK STAMPED MOP NO 2 1958, SET IN THE
DV0164'TOP OF A CONCRETE CYLINDER THAT IS FLUSH WITH THE GROUND.  IT
DV0164'IS 33.8 FEET SOUTHEAST OF THE WITNESS POST.
DV0164'
DV0164'TRIANGULATION STATION CARL CAN BE USED AS AN AZIMUTH MARK.
DV0164'(SEE DESCRIPTION THEREOF.)
DV0164
DV0164                           STATION RECOVERY (1959)
DV0164
DV0164'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1959
DV0164'5.1 MI S FROM BLACK CANYON.
DV0164'5.1 MILES SOUTH ALONG STATE HIGHWAY 69 FROM THE POST OFFICE IN BLACK
DV0164'CANYON, TO THE SOUTH END OF A HIGHWAY CUT, ABOUT 150 FEET EAST OF THE
DV0164'HIGHWAY, 4.5 FEET WEST OF THE FENCE, 5 FEET SOUTHWEST OF THE WITNESS
DV0164'POST, SET IN THE TOP OF A CONCRETE CYLINDER THAT PROJECTS 6 INCHES.
1        National Geodetic Survey,   Retrieval Date = JUNE  4, 2002
DV0166 ***********************************************************************
DV0166  DESIGNATION -  MOP RM 1
DV0166  PID         -  DV0166
DV0166  STATE/COUNTY-  AZ/MARICOPA
DV0166  USGS QUAD   -  NEW RIVER (1981)
DV0166
DV0166                          *CURRENT SURVEY CONTROL
DV0166  ______________________________________________________________________
DV0166* NAD 83(1986)-  33 59 54.     (N)    112 08 14.     (W)     SCALED
```

```
DV0166* NAVD 88      -        629.57   (+/-2cm)    2065.5    (feet)  VERTCON
DV0166  ____________________________________________________________________
DV0166  GEOID HEIGHT-          -28.40  (meters)                      GEOID99
DV0166
DV0166  VERT ORDER  -  SECOND    CLASS 0 (See Below)
DV0166
DV0166.The horizontal coordinates were scaled from a topographic map and have
DV0166.an estimated accuracy of +/- 6 seconds.
DV0166
DV0166.The NAVD 88 height was computed by applying the VERTCON shift value to
DV0166.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)
DV0166.The vertical order pertains to the superseded datum.
DV0166
DV0166.The geoid height was determined by GEOID99.
DV0166
DV0166;                     North         East    Units  Estimated Accuracy
DV0166;SPC AZ C      -    332,490.      192,990.      MT  (+/- 180 meters Scaled)
DV0166
DV0166                          SUPERSEDED SURVEY CONTROL
DV0166
DV0166  NGVD 29      -        628.961  (m)         2063.52   (f) ADJ UNCH    2 0
DV0166
DV0166.Superseded values are not recommended for survey control.
DV0166.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
DV0166.See file dsdata.txt to determine how the superseded data were derived.
DV0166
DV0166_MARKER: DR = REFERENCE MARK DISK
DV0166_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
DV0166_STAMPING: MOP NO 1 1958
DV0166_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
DV0166+STABILITY: SURFACE MOTION
DV0166
DV0166  HISTORY      - Date     Condition        Report By
DV0166  HISTORY      - 1958     MONUMENTED       CGS
DV0166  HISTORY      - 1959     GOOD             NGS
DV0166
DV0166                          STATION DESCRIPTION
DV0166
DV0166'DESCRIBED BY NATIONAL GEODETIC SURVEY 1959
DV0166'5.1 MI S FROM BLACK CANYON.
DV0166'5.1 MILES SOUTH ALONG STATE HIGHWAY 69 FROM THE POST OFFICE IN BLACK
DV0166'CANYON, TO THE SOUTH END OF A HIGHWAY CUT, ABOUT 150 FEET EAST OF THE
DV0166'HIGHWAY, 30.8 FEET NORTH OF THE WITNESS POST, 2 FEET WEST OF THE
DV0166'FENCE, SET IN THE TOP OF A CONCRETE CYLINDER POST THAT PROJECTS 5
DV0166'INCHES.
1        National Geodetic Survey,   Retrieval Date = JUNE  4, 2002
DV0165 ***********************************************************************
DV0165  DESIGNATION -  MOP RM 2
DV0165  PID         -  DV0165
DV0165  STATE/COUNTY-  AZ/MARICOPA
DV0165  USGS QUAD   -  NEW RIVER (1981)
DV0165
DV0165                         *CURRENT SURVEY CONTROL
DV0165  ____________________________________________________________________
DV0165* NAD 83(1986)-  33 59 54.     (N)    112 08 14.     (W)     SCALED
DV0165* NAVD 88      -        629.51   (+/-2cm)    2065.3    (feet)  VERTCON
DV0165  ____________________________________________________________________
DV0165  GEOID HEIGHT-          -28.40  (meters)                      GEOID99
DV0165
DV0165  VERT ORDER  -  SECOND    CLASS 0 (See Below)
```

```
DV0165
DV0165.The horizontal coordinates were scaled from a topographic map and have
DV0165.an estimated accuracy of +/- 6 seconds.
DV0165
DV0165.The NAVD 88 height was computed by applying the VERTCON shift value to
DV0165.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)
DV0165.The vertical order pertains to the superseded datum.
DV0165
DV0165.The geoid height was determined by GEOID99.
DV0165
DV0165;                    North         East    Units  Estimated Accuracy
DV0165;SPC AZ C     -   332,490.      192,990.      MT  (+/- 180 meters Scaled)
DV0165
DV0165                          SUPERSEDED SURVEY CONTROL
DV0165
DV0165  NGVD 29     -       628.894  (m)         2063.30   (f) ADJ UNCH    2 0
DV0165
DV0165.Superseded values are not recommended for survey control.
DV0165.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
DV0165.See file dsdata.txt to determine how the superseded data were derived.
DV0165
DV0165_MARKER: DR = REFERENCE MARK DISK
DV0165_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
DV0165_STAMPING: MOP NO 2 1958
DV0165_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
DV0165+STABILITY: SURFACE MOTION
DV0165
DV0165  HISTORY     - Date     Condition        Report By
DV0165  HISTORY     - 1958     MONUMENTED       CGS
DV0165  HISTORY     - 1959     GOOD             NGS
DV0165
DV0165                          STATION DESCRIPTION
DV0165
DV0165'DESCRIBED BY NATIONAL GEODETIC SURVEY 1959
DV0165'5.1 MI S FROM BLACK CANYON.
DV0165'5.1 MILES SOUTH ALONG STATE HIGHWAY 69 FROM THE POST OFFICE IN BLACK
DV0165'CANYON, TO THE SOUTH END OF A HIGHWAY CUT, ABOUT 150 FEET EAST OF THE
DV0165'HIGHWAY, 33.8 FEET SOUTHEAST OF THE WITNESS POST, SET IN THE TOP OF A
DV0165'CONCRETE CYLINDER POST THAT IS FLUSH WITH THE GROUND.

*** retrieval complete.
Elapsed Time = 00:00:05
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The NGS Data Sheet

See file dsdata.txt for more information about the datasheet.

```
DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 6.59
1        National Geodetic Survey,   Retrieval Date = JUNE  3, 2002
 ET0172 ***********************************************************************
 ET0172  DESIGNATION -  ROCK
 ET0172  PID         -  ET0172
 ET0172  STATE/COUNTY-  AZ/MARICOPA
 ET0172  USGS QUAD   -  BLACK CANYON CITY (1969)
 ET0172
 ET0172                         *CURRENT SURVEY CONTROL
 ET0172  ______________________________________________________________________
 ET0172* NAD 83(1992)-  34 02 46.17157(N)    112 08 50.22653(W)     ADJUSTED
 ET0172* NAVD 88     -       666.12   (meters)    2185.4    (feet)  GPS OBS
 ET0172  ______________________________________________________________________
 ET0172  X           -  -1,994,618.248 (meters)                     COMP
 ET0172  Y           -  -4,900,546.284 (meters)                     COMP
 ET0172  Z           -   3,551,047.228 (meters)                     COMP
 ET0172  LAPLACE CORR-            3.92 (seconds)                    DEFLEC99
 ET0172  ELLIP HEIGHT-          637.83 (meters)                     GPS OBS
 ET0172  GEOID HEIGHT-          -28.21 (meters)                     GEOID99
 ET0172
 ET0172  HORZ ORDER  -  A
 ET0172  VERT ORDER  -  SECOND    CLASS 0 (See Below)
 ET0172  ELLP ORDER  -  THIRD     CLASS I
 ET0172
 ET0172.The horizontal coordinates were established by GPS observations
 ET0172.and adjusted by the National Geodetic Survey in September 1999.
 ET0172
 ET0172.The orthometric height was determined by GPS observations and a
 ET0172.high-resolution geoid model using precise GPS observation and
 ET0172.processing techniques.
 ET0172.The vertical order pertains to the superseded datum.
 ET0172
 ET0172.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 ET0172
 ET0172.The Laplace correction was computed from DEFLEC99 derived deflections.
 ET0172
 ET0172.The ellipsoidal height was determined by GPS observations
 ET0172.and is referenced to NAD 83.
 ET0172
 ET0172.The geoid height was determined by GEOID99.
 ET0172
 ET0172;                    North         East     Units   Scale      Converg.
 ET0172;SPC AZ C     -   337,797.389   192,068.000   MT  0.99990559 -0 07 44.8
 ET0172;UTM  12      - 3,767,867.608   394,105.383   MT  0.99973823 -0 38 32.6
 ET0172
 ET0172:                Primary Azimuth Mark                     Grid Az
 ET0172:SPC AZ C     -  HI                                       164 21 00.7
 ET0172:UTM  12      -  HI                                       164 51 48.5
 ET0172
 ET0172|-----------------------------------------------------------------------|
 ET0172| PID    Reference Object                     Distance      Geod. Az    |
 ET0172|                                                           dddmmss.s  |
 ET0172| ET0929 BOUNDARY MON MARICOPA YAVAPAI CNTY   18.160 METERS 00714       |
```

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ET0172| ET0171 ROCK RM 1                              9.508 METERS 05914      |
ET0172| ET0928 HI                                  APPROX. 2.3 KM 1641315.9 |
ET0172| ET0173 ROCK RM 2                             21.693 METERS 24448      |
ET0172|-----------------------------------------------------------------------|
ET0172
ET0172                          SUPERSEDED SURVEY CONTROL
ET0172
ET0172  NAD 83(1992)-  34 02 46.17268(N)    112 08 50.22964(W) AD(       ) 1
ET0172  NAD 83(1986)-  34 02 46.16720(N)    112 08 50.23207(W) AD(       ) 1
ET0172  NAD 27      -  34 02 46.04200(N)    112 08 47.65100(W) AD(       ) 1
ET0172  NGVD 29     -       665.418  (m)         2183.13   (f) ADJ UNCH    2 0
ET0172
ET0172.Superseded values are not recommended for survey control.
ET0172.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
ET0172.See file dsdata.txt to determine how the superseded data were derived.
ET0172
ET0172_MARKER: DD = SURVEY DISK
ET0172_SETTING: 66 = SET IN ROCK OUTCROP
ET0172_STAMPING: ROCK 1924
ET0172_MARK LOGO: CGS
ET0172_MAGNETIC: N = NO MAGNETIC MATERIAL
ET0172_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
ET0172+STABILITY: POSITION/ELEVATION WELL
ET0172_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
ET0172+SATELLITE: SATELLITE OBSERVATIONS - March 22, 2000
ET0172
ET0172  HISTORY     - Date     Condition        Report By
ET0172  HISTORY     - 1924     MONUMENTED       CGS
ET0172  HISTORY     - 1959     GOOD             CGS
ET0172  HISTORY     - 1959     GOOD             NGS
ET0172  HISTORY     - 19990112 GOOD             AZ-025
ET0172  HISTORY     - 20000322 GOOD             MCDOT
ET0172
ET0172                          STATION DESCRIPTION
ET0172
ET0172'DESCRIBED BY COAST AND GEODETIC SURVEY 1924 (WM)
ET0172'ABOUT 40 MILES DUE NORTH OF PHOENIX, 2 MILES SOUTHEAST OF
ET0172'CANYON, AND ONE-FOURTH MILE SOUTH OF THE ROCK SPRINGS STORE
ET0172'ON THE BLACK CANYON ROAD, ON A LOW TUFA HILL ABOUT 100 YARDS
ET0172'EAST OF THE ROAD WHERE THE MARICOPA-YAVAPAI COUNTY LINE CROSSES
ET0172'IT.  MARKED BY A STANDARD BRONZE DISK.
ET0172
ET0172                          STATION RECOVERY (1959)
ET0172
ET0172'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1959 (RCM)
ET0172'THE STATION AND REFERENCE MARK 1 WERE RECOVERED AS DESCRIBED
ET0172'AND FOUND TO BE IN GOOD CONDITION.  A NEW REFERENCE MARK 2 WAS
ET0172'ESTABLISHED.
ET0172'
ET0172'FOLLOWING IS A NEW DESCRIPTION--
ET0172'
ET0172'THE STATION IS LOCATED ON A LOW HILL ABOUT 2 MILES SOUTH OF
ET0172'BLACK CANYON, 0.25 MILE SOUTH OF ROCK SPRINGS AND JUST EAST
ET0172'OF ARIZONA STATE HIGHWAY 69.
ET0172'
ET0172'TO REACH THE STATION FROM THE POST OFFICE IN BLACK CANYON, GO
ET0172'SOUTH ON STATE HIGHWAY 69 FOR 1.7 MILES TO THE END OF TRUCK
ET0172'TRAVEL.  PACK EAST UP GRADE FROM THE HIGHWAY FOR ABOUT 10 MINUTES
ET0172'TO THE TOP OF HILL AND STATION.
ET0172'
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ET0172'THE STATION IS A STANDARD DISK, STAMPED ROCK 1924, CEMENTED
ET0172'IN A DRILL HOLE IN A BOULDER THAT PROJECTS 2 INCHES AND IS 59.5
ET0172'FEET SOUTH OF A YAVAPAI-MARICOPA COUNTY BOUNDARY MONUMENT.
ET0172'
ET0172'REFERENCE MARK 1 IS A STANDARD DISK, STAMPED ROCK NO 1 1924,
ET0172'CEMENTED IN A DRILL HOLE IN A BOULDER THAT PROJECTS 4 INCHES
ET0172'AND IS 47.4 FEET SOUTHEAST OF THE COUNTY BOUNDARY MOUNUMENT.
ET0172'
ET0172'REFERENCE MARK 2 IS A STANDARD DISK, STAMPED ROCK NO 2 1958,
ET0172'CEMENTED IN A DRILL HOLE IN BEDROCK THAT PROJECTS 3 INCHES
ET0172'AND IS ON THE WEST EDGE OF THE RIMROCK.  IT IS 114 FEET SOUTHWEST
ET0172'OF THE COUNTY BOUNDARY MONUMENT.
ET0172'
ET0172'THE YAVAPAI-MARICOPA COUNTY BOUNDARY MONUMENT IS A SMALL
ET0172'TRIANGULAR SHAPED CONCRETE MONUMENT THAT PROJECTS 18 INCHES.
ET0172'YAVAPAI IS STAMPED IN THE NORTH SIDE OF THE MONUMENT AND
ET0172'MARICOPA IS STAMPED IN THE SOUTH SIDE OF THE MONUMENT
ET0172'TRIANGULATION STATION HI CAN BE USED AS AN AZIMUTH MARK.  (SEE
ET0172'DESCRIPTION THEREOF.)
ET0172
ET0172                          STATION RECOVERY (1959)
ET0172
ET0172'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1959
ET0172'1.7 MI S FROM BLACK CANYON.
ET0172'1.7 MILES SOUTH ALONG STATE HIGHWAY 69 FROM THE POST OFFICE IN BLACK
ET0172'CANYON, 0.25 MILE SOUTH OF ROCK SPRINGS, THENCE GO EAST UNTIL REACHING
ET0172'THE TOP OF THE HILL, 59.5 FEET SOUTH OF THE YAVAPAI-MARICOPA COUNTY
ET0172'BOUNDARY MONUMENT, CEMENTED IN A DRILL HOLE IN A BOULDER THAT PROJECTS
ET0172'2 INCHES.
ET0172
ET0172                          STATION RECOVERY (1999)
ET0172
ET0172'RECOVERY NOTE BY YAVAPAI COUNTY ARIZONA 1999 (WRA)
ET0172'THE STATION IS LOCATED ABOUT 2 MI (3.2 KM) SOUTH OF BLACK CANYON CITY,
ET0172'IN THE MEDIAN OF INTERSTATE HIGHWAY 17, ON TOP OF A MOUNTAIN.
ET0172'OWNERSHIP--STATE TRUST.  TO REACH THE STATION FROM THE POST OFFICE IN
ET0172'BLACK CANYON CITY, GO SOUTH FOR 1.7 MI (2.7 KM) ON OLD BLACK CANYON
ET0172'HIGHWAY TO WHERE IT MERGES WITH THE SOUTHBOUND LANE OF INTERSTATE
ET0172'HIGHWAY 17 AND END OF VEHICLE TRAVEL.  PACK EAST FOR ABOUT 10 MINUTES
ET0172'TO THE TOP OF HILL AND STATION.  THE STATION IS SET IN A BOULDER
ET0172'PROJECTING 5 CM ABOVE GROUND.
ET0172
ET0172                          STATION RECOVERY (2000)
ET0172
ET0172'RECOVERY NOTE BY MARICOPA CO DOT 2000 (JJR)
ET0172'RECOVERED AS DESCRIBED.

*** retrieval complete.
Elapsed Time = 00:00:06
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Book _____ Page _____

RBF CONSULTING

MULTIPLE OBSERVATION GPS LOG SHEET

Job No.	Date	Day	Job Name
45-100648	5-14-02	134	UPPER AGUA FRIA

Observer	Equip. No.	Antenna Type	Antenna Meas. Technique
WILLIS/WASHICKO		Compact L1L2 w/GP | wo/GP | L1L2 Geo w/GP | 4000 | Other	Edge of GP | Base | Phase Center | Other

Station No.	Name	Start Time	Stop Time	H.I.(m)	Description
File Name / Monument Location / Target Offset / Notes					
UAF 37	B.M.	8:47AM	9:08AM	5.90	2½" BRASS CAP UAF37
UAF 37 134 1	/ SW COR. SEC. 2 .50 MILE± IN FROM TABLE MESA RD.				/ NEW WAY PT. 38 N 33-58-32 W 112-07-42
UAF36	B.M.	9.42 AM	9:57 AM	5.90	2½" BRASS CAP UAF 36
AF36 1342	/ ELY SIDE SEC. 3 1 MILE FROM TABLE MESA UP A SMALL HILL 200' ± FROM DIRT RD.				/ NEW WAY PT 40 N 33-58-45 W 112-08-15
UAF35	B.M.	10:15 AM	10:31 AM	5.90	2½" BRASS CAP UAF 35
AF35 1343	/ 1.5 MILES ± FROM TABLE MESA RD.				/ NEW WAY PT #41 N33-59-06 W112-08-40
UAF28	B.M	10:50 AM	11:05 AM	5.90	2½" BRASS CAP UAF 28
AF28 1344	/ 2.0 MILES N'LY TABLE MESA RD.				/ NEW WAY PT # 42 N33-59.26 W 112-08-51
UAF30	B.M.	11:28 AM	11:43 AM	5.90	2½" BRASS CAP UAF 30
AF30 1345	/ 750' NRTH OF END OF SIDE DIRT RD.				/ NEW WAY PT. #102 N33-59.13 W112-09-39
UAF26	BM	12:25 pm	12:40 pm	5.90	2½" BRASS CAP UAF26
AF26 1346	/ SW'LY OF ℄ SEC. 32 800' ±				NEW WAY PT #104 N33-59-33 W112-10-37
UAF27	BM	1:20 pm	1:35 pm	5.90	2½ BRASS CAP UAF27 WAY PT #106 N33-59-37 W 112-10-11
AF27 1347	/ 375' SLY OF DIRT RD. NEAR ELY ¼ COR. SEC 32				/ DID NOT FIND ¼ COR. JUST APPROX.
UAF34	BM	2:31 pm	2:46 pm	5.90	2½" BRASS CAP UAF 34
AF34 1347	/ 400' ± WLY OF DIRT RD -				/ NEW WAY PT. #107 N33-58-48 W 112-10-40

Book _____ Page _____

RBF CONSULTING

MULTIPLE OBSERVATION GPS LOG SHEET

Job No.	Date	Day	Job Name
45-100648	5-14-02	134	UPPER AGUA FRIA

Observer	Equip. No.	Antenna Type	Antenna Meas. Technique
PAUL	1022	Compact L1L2 w/GP | wo/GP | L1L2 Geo w/GP | 4800 | Other	Edge of GP | Base | Phase Center | Other

Station No.	Name	Start Time	Stop Time	H.I.(m)	Description
1PD5	GDACS			2	BASE

File Name / Monument Location / Target Offset / Notes

1PD5	GDACS	7:43 AM 14:43 UTC	3:25 pm	2	BASE
1PD5134B					(6.562F)

"CONTAMINATED FILE?"

RBF CONSULTING

Book _____ Page _____

Sheet _____ of _____

MULTIPLE OBSERVATION GPS LOG SHEET

Job No.	Date	Day	Job Name
45100648	5-15-02	135	AUGUA FRIA

Observer	Equip. No.	Antenna Type	Antenna Meas. Technique
KLEIN	4800	Compact L1L2 w/GP | wo/GP | L1L2 Geo w/GP (4800) Other	Edge of GP | Base | Phase Center | Other

This Unit is the: ☐ Base ☑ Rover | RTK File Name:

Station No.	Name	Start Time	Stop Time	H.I.(m)	Description
File Name / Monument Location / Target Offset / Notes					
UAF 29	BM.	8:02 AM	8:17 AM	5.90 FT.	2½" BRASS DISC UAF 29
AF291351 / 600' SOUTH OF ⊥ OF ROAD DUE SOUTH					/ NEW WAY PT# 108 N33-59-14 W112-11-13
UAF 25	B.M.	9:00 AM	9:15 AM	5.90 F	2½" BRASS DISC UAF#25
AF251352 / SW COR OF MAIN PROP. LITTLE GRAND CANYON RANCH					/ NEW WAY PT#109 N33-59-18 W112-11-34
UAF 33	B M	9:40 AM	9:55 AM	5.90 FT	2½ BRASS DISC UAF 33
AF331353 / .45 MILES± FROM SPLIT OF DIRT RD'S 40'± ELY OF ℄					/ NEW WAY PT# 110 N33-58-39 W112-11-01
UAF 32	B. M.	10:22 AM	10:38 AM	5.90 FT	2½" BRASS DISC UAF 32
AF321354 /					/ NEW WAY PT#111 N33-58-40 W112-11-34
UAF 31	BM	11:17 A.M	11:34 AM	5.90 FT	2½" BRASS DISC UAF 31
AF311355 / UPPER ARM PLEASANT LAKE IS DUE NORTH 1000'±					/ NEW WAY PT# 112 N33-58-14 W112-11-54
UAF 15	BM	12:28 pm	12:43 pm	5.90 FT	NEW WAY PT# 113 N34-00-16 W112-08-35
AF151356 / I 17 SOUTH IS DUE EAST 800'±					/ 2½" BRASS CAP U.A.F 15
UAF 16	B.M.	1:23 pm	1:39 pm	5.90 FT	2½" BRASS CAP UAF 16
AF161358 / 50'± WEST OF N'LY BRIDGE ABUT I 17 NORTHBND OVER MOORE GULCH / MON IS UP. 30'±					/ NEW WAY PT#114 N34-00-00 W112-08-03
UAF 21	B.M	2:01 pm	2:16 pm	5.90 FT	2½ BRASS CAP UAF 21
AF211359 / 1 MILE EAST ± FROM I 17 NORTHBOUND BRIDGE					/ NEW WAY PT # 123 N33-59-48 W112-07-04
NOTE SESSION 7 WAS ABORTED					
UAF 22	B.M.	2:27 pm	2:42 pm	5.90 FT	2½" BRASS DISC UAF 22
F2213510 / ½ MILE FURTHER EAST OF UAF 21 ALONG SAME ROCKY ROAD					/ NEW WAY PT#151 N33-59-41 W112-06-31
UAF 23	B.M.	2:56 pm	3:11 pm	5.90 FT	2½" BRASS DISC. UAF 23
F2313511 / 2 MILE'S EAST OF I-17 ALONG ROCKY ROAD THROUGH MOORE GULCH					/ NEW WAY PT #152 N33-59-42 W112-06-03

"CONTOMINATED FILE?"

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Book _____ Page _____

Sheet _____ of _____

MULTIPLE OBSERVATION GPS LOG SHEET

Job No.	Date	Day	Job Name
45-100648	5-14-2002	135	UPPER AGUA FRIA

Observer	Equip. No.	Antenna Type	Antenna Meas. Technique
KLEIN	1022	Compact L1L2 w/GP | wo/GP | L1L2 Geo w/GP | 4800 | Other	Edge of GP | Base | Phase Center | Other

This Unit is the: ☑ Base ☐ Rover | RTK File Name:

Station No.	Name	Start Time	Stop Time	H.I.(m)	Description
File Name / Monument Location / Target Offset / Notes					
1PD5135B	GDACS	13:43 UTC		2.0m	BASE
				6.562 FT.	

Book _____ Page _____

Sheet _____ of _____

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MULTIPLE OBSERVATION GPS LOG SHEET

Job No.	Date	Day	Job Name
45-100648	5-16-2002	136	UPPER AGUA FRIA

Observer	Equip. No.	Antenna Type	Antenna Meas. Technique
KLEIN	~~9508~~	Compact L1L2 w/GP | wo/GP | L1L2 Geo w/GP | 4800 | Other	Edge of GP (Base) | Phase Center | Other

This Unit is the: ☑ Base ☐ Rover

RTK File Name: N/A

Station No.	Name	Start Time	Stop Time	H.I.(m)	Description
File Name / Monument Location / Target Offset / Notes					
~~1PD5136B~~	1PD5	7:13 AM	4:06 pm	2.0m	BASE
95081361					

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Book _____ Page _____

Sheet _____ of _____

MULTIPLE OBSERVATION GPS LOG SHEET

Job No.	Date	Day	Job Name
45-100648	5-16-2002	136	UPPER AGUA FRIA

Observer	Equip. No.	Antenna Type	Antenna Meas. Technique
KLEIN, WILLIS, WASHBURN		Compact L1L2 w/GP | wo/GP | L1L2 Geo w/GP | 4800 | Other	Edge of GP | Base | Phase Center | Other

This Unit is the: ☐ Base ☑ Rover | RTK File Name:

Station No.	Name	Start Time	Stop Time	H.I.(m)	Description
File Name / Monument Location / Target Offset / Notes					
UAF 17	BM	8:00 AM	8:15 AM	5.90 FT	2 1/2" BRASS DISC UAF 17
AF171361 / 1/2 MILE EAST OF I-17 NORTHBOUND. ALONG A DRY GULCH					/ NEW WAY PT #153 N33-59-49 W112-07-36
UAF 19	BM	8:50 AM	9:05 AM	5.90 FT	2 1/2 BRASS DISC. UAF 19
AF191362 / 1 MILE ± EAST OF I-17 N.B IS SPLIT IN RD - NORTH 1 MILE ± TO MON. UAF 19					/ NEW WAY PT #154 N34-00-24 W112-06-25
UAF 18	BM	10:20 AM	10:35 AM	5.90 FT	2 1/2" BRASS DISC UP 1.0' ± GLO CAP 1917
AF181363 / 1/2 MILE WEST OF UAF 19 - MUST HIKE TO PT -					/ NEW WAY PT #155 N34-00-32 W112-07-02
UAF 24	BM	12:47 PM	1:02 PM	5.90 FT	2 1/2" BRASS DISC. UAF 24
AF241364 / .50 MILE ± EAST OF UAF 23					/ NEW WAY PT #158 N33-59-56 W112-05-28
UAF 20	BM	1:42 PM	1:57 PM	5.90 FT	2 1/2" BRASS DISC UAF 20
AF201365 / 1.0 MI ALONG ROCKY RD. FROM UAF 24 - 15' ± NLY OF ROAD					/ NEW WAY PT #159 N34-00-34 W112-04-58
UAF 14	BM	3:08 PM	3:23 PM	5.90 FT	2 1/2" BRASS DISC UAF 14
AF141366 / 1.1 MI ± OFF OF TABLE MESA RD. NLY					/ NEW WAY PT #160 N34-00-32 W112-09-08

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Book _____ Page _____

Sheet _____ of _____

MULTIPLE OBSERVATION GPS LOG SHEET

Job No.	Date	Day	Job Name
45-100648	5-17-2002	137	UPPER AGUA FRIA

Observer	Equip. No.	Antenna Type	Antenna Meas. Technique
WILLIS	3702	Compact L1L2 w/GP | wo/GP | L1L2 Geo w/GP (4800) Other	BOTTOM OF MOUNT Edge of GP | Base | Phase Center | Other.

This Unit is the: ☐ Base ☑ Rover | RTK File Name:

Station No.	Name	Start Time	Stop Time	H.I.(m)	Description
File Name / Monument Location / Target Offset / Notes					
UAF 11	BM.	8:34 AM	8:55 AM	6.655FT	2½" BRASS DISC UP .30'± UAF 11
AF11137 1	WEST OF I-17 NORTH BOUND BRIDGE OVER LITTLE SQUAW CREEK				NEW WAYPT #161 N34-00-49 W112-08-16
UAF 12	BM	10:00 AM	10:15 AM	6.655FT	2½" BRASS DISC UAF #12
AF12137 2					NEW WAY PT #162 N34-01-03 W112-07-48
UAF 8	BM	10:53 AM	11:08 AM	6.655FT	2½" BRASS DISC UAF 8
AF8137 3					NEW WAY PT #163 N-34-01-24 W 112-07-32
UAF 13	B.M.	12:25 PM	12:44 pm	6.655FT	2½" BRASS DISC UAF 13
AF13137 4					NEW WAY PT # 164 N34-00-37 W 112-09-32
UAF 9	B.M.	1:15 PM	1:32 pm	6.655FT	2½" BRASS DISC GLO CAP UP 1'± ON 1" I.P.
AF9137 5					NEW WAY PT # 165 N34-00-59 W 112-09-40

"GOOD SESSIONS"

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Book _____ Page _____

Sheet _____ of _____

MULTIPLE OBSERVATION GPS LOG SHEET

Job No.	Date	Day	Job Name
45-100648	5-17-2002	137	UPPER AGUA FRIA

Observer	Equip. No.	Antenna Type	Antenna Meas. Technique
KLEIN	9508	Compact L1L2 w/GP | wo/GP | L1L2 Geo w/GP | 4800 | Other	BOTTOM OF MOUNT Edge of GP | Base | Phase Center | Other

This Unit is the: ☑ Base ☐ Rover

RTK File Name:

Station No.	Name	Start Time	Stop Time	H.I.(m)	Description
File Name / Monument Location / Target Offset / Notes					
1PD5137B	1PDS	7:15 AM	3:00 pm	2.0m 6.562 FT	BASE
95081371					

"GOOD SESSIONS"

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Book _____ Page _____

Sheet _____ of _____

MULTIPLE OBSERVATION GPS LOG SHEET

Job No.	Date	Day	Job Name
100648	5-17-02	137	UPPER AGUA FRIA

Observer	Equip. No.	Antenna Type	Antenna Meas. Technique
WASHCKO	(UNIT 10 IRVING) 3982	Compact L1L2 w/GP | wo/GP | L1L2 Geo w/GP (4800) Other	Edge of GP (Base) Phase Center | Other

This Unit is the: ☒ Base ☐ Rover | RTK File Name: N/A

Station No.	Name	Start Time	Stop Time	H.I.(m) 5.906	Description
File Name / ~~Monument Location~~ / ~~Target Offset~~ / ~~Notes~~					
UAF29 ✓	UAF29	8:19 A.M	8:34	5.906	2½" BRASS CAP STAMPED UAF 29
AF291371					
UAF25 ✓	UAF 25	8:46 A.M	9:01	5.906	2½" BRASS CAP STAMPED UAF25
AF251372					
UAF33 ✓	UAF33	9:21	9:36	5.906	2½" BRASS CAP STAMPED UAF33
AF331373					
UAF32 ✓	UAF32	9:59	10:15	5.906	2½" BRASS CAP STAMPED UAF32
AF321374					
UAF31 ✓	UAF31	10:39	10:57	5.906	2½" BRASS CAP STAMPED UAF 31
AF311375					
UAF15	UAF15	11:34	11:50	5.906	2½" BRASS CAP STAMPED UAF 15
AF151376					
UAF16	UAF16	12:13	12:29	5.906	2½" BRASS CAP STAMPED UAF 16
AF151377					
UAF17 ✓	UAF17	12:38	12:53	5906	2½" BRASS CAP STAMPED UAF17
AF171378					
UAF21 ✓	UAF21	1:02	1:18	5906	2½" BRASS CAP STAMPED UAF21
AF211379					
UAF22 ✓	UAF22	1:35	1:50	5.906	2½" BRASS CAP STAMPED UAF22
F2213710					
UAF23 ✓	UAF23	1:56	2:11	5.906	2½" BRASS CAP STAMPED UAF23
F2315711					

DO NOT REPORT

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Book _____ Page _____

Sheet _____ of _____

MULTIPLE OBSERVATION GPS LOG SHEET

Job No.	Date	Day	Job Name
45-100648	5-20-2002	140	UPPER AGUA FRIA

Observer	Equip. No.	Antenna Type	Antenna Meas. Technique
KLEIN WILLIS, HAYNES	3702	Compact L1L2 w/GP | wo/GP | L1L2 Geo w/GP | (4800) | Other	Edge of GP | (Base) | Phase Center | Other

This Unit is the: ☐ Base ☑ Rover | RTK File Name:

Station No.	Name	Start Time	Stop Time	H.I.(m)	Description
File Name / Monument Location / Target Offset / Notes					
UAF 5	B.M.	9:10 AM	9:25 AM	6.655	2 1/2" BRASS DISC FLUSH UAF 5
AF51401					NEW WAY PT # N34-01-51 W112-06-28
UAF 4	BM	9:45 AM	10:00 AM	6.655	2 1/2" GLO CAP UP 1.0 IN ROCK MOUND
AF41402	FOUND A SEC-COR- ALONG ROCKY ROAD .70mi WLY OF UAF 5				NEW WAY PT-# 168 N34-01-51 W112-07-03
UAF 2	BM	10:45 AM	11:00 AM	6.655	2 1/2" BRASS DISC UAF 2
AF21403					NEW WAY PT # N34-02-13 W112-06-03
~~UAF 3~~	~~BM~~	~~11:35 AM~~	~~11:50 AM~~	~~6.655~~	~~2 1/2" BRASS DISC UP .30' ± UAF 3~~
~~AF31404~~	~~.57mi ± UP THE WASH FROM UAF 2~~				~~NEW WAY PT # N34-02-20 W112-05-33~~
UAF 3	BM	11:50 AM	12:05 PM	6.655	2 1/2" BRASS DISC UP .30' ± UAF 3
AF31405	.57mi ± UP THE WASH FROM U.A.F. 2				NEW WAY PT # 170 N34-02-20 W112-05-33
UAF 10	BM	12:02 PM	2:17 PM	6.655	2 1/2" BRASS DISC - UAF 10
AF101406	1/4 MI. WLY OF I-17 SOUTH BOUND				NEW WAY PT-# 171 N34-00-53 W112-09-06

INIT SLEW OVER

Book _____ Page _____

Sheet _____ of _____

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MULTIPLE OBSERVATION GPS LOG SHEET

Job No.	Date	Day	Job Name
45-100648	5-20-2002	140	UPPER AGUA FRIA

Observer	Equip. No.	Antenna Type	Antenna Meas. Technique
KURT WILLIS HAYNES	9058	Compact L1L2 w/GP | wo/GP | L1L2 Geo w/GP | 4800 | Other	Edge of GP | Base | Phase Center | Other

This Unit is the: ☑ Base ☐ Rover | RTK File Name:

Station No.	Name	Start Time	Stop Time	H.I.(m)	Description
File Name / Monument Location / Target Offset / Notes					
1PD5		7:10 AM	2:45 PM	2.0 M	BASE
~~1PD5140B~~ 95081401					

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Book _____ Page _____

Sheet _____ of _____

MULTIPLE OBSERVATION GPS LOG SHEET

Job No.	Date	Day	Job Name
45-100648	5-21-2002	141	UPPER AGUA FRIA

Observer	Equip. No.	Antenna Type	Antenna Meas. Technique
KLEIN, HAYNES	9508	(Compact L1L2 w/GP) wo/GP | L1L2 Geo w/GP | 4800 | Other	(Edge of GP) | Base | Phase Center | Other

This Unit is the: ☑ Base ☐ Rover | RTK File Name:

Station No.	Name	Start Time	Stop Time	H.I.(m)	Description
File Name / Monument Location / Target Offset / Notes					
1PD5		7:07 am	4:14 pm	5.64 FT	BASE
1PD5 95081472					
"STARTED AND ENDED SURVEY FROM 7:03 TO 7:05 THEN RESTARTED					
@ 7:07 — FILE NAME PROBLEM?"					

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Book _____ Page _____

Sheet _____ of _____

MULTIPLE OBSERVATION GPS LOG SHEET

Job No.	Date	Day	Job Name
45-100648	5-21-2002	141	UPPER AGUA FRIA

Observer	Equip. No.	Antenna Type	Antenna Meas. Technique
KLEIN, HAYNES	3702	Compact L1L2 w/GP | wo/GP | L1L2 Geo w/GP | 4800 | Other	Edge of GP | Base | Phase Center | Other

This Unit is the: ☐ Base ☑ Rover | RTK File Name:

Station No.	Name	Start Time	Stop Time	H.I.(m)	Description
File Name / Monument Location / Target Offset / Notes					
UAF 6	BM	8:27 AM	8:42AM	5.90FT	2½" BRASS DISC UAF 6 UP.30
UAF61411	OBSERVED W/EDGE OF G.P. ANT NOT BOTTOM OF MOUNT				NEW WAY PT #172 N34-01-24 W 112-09-44
UAF 1	BM	11:01 AM	11:17AM	5.90FT	2½" BRASS DISC - UAF 1 UP.10'
UAF11412	SHOT WITH BOTTOM ANT-MOUNT				NEW WAY PT # 174 N34-02-09 W 112-08-02
UAF 7	B.M.	12:17 PM	12:32PM	5.90FT	2½" BRASS DISC UAF7 FLUSH
UAF71413	@ 6MIN MARK RECIEVER WENT DOWN BUT CAME BACK UP				NEW WAY PT #175 N34-01-22 W112-09-01
UAF 37	B.M.	12:56pm	1:11pm	5.90FT	2½" BRASS DISC FLUSH STAMPED UAF 37
AF371415	ALL MON'S ARE SET IN AN 24" ALUM. PIPE (TYP.)				WAY PT # 38
(SESSION 4 BAT. ON ROVER DIED)					
UAF 36	BM	1:18 PM	1:33pm	5.90FT	2½" BRASS DISC UP.10'± STAMPED UAF 36
AF361416					WAY PT # 40
UAF 35		1:40 PM	1:55pm	5.90FT	2½" BRASS DISC UP.10'± STAMPED UAF 35
AF351417					WAY PT # 41
UAF28	B.M.	2:02 PM	2:17 PM	5.90FT	2½" BRASS DISC UP.10'± STAMPED UAF 28
AF281418					WAY PT # 42
UAF 27	B.M.	2:27 PM	2:42PM	5.90FT	2½ BRASS DISC UP.10'± STAMPED UAF 27
AF271419					WAY PT # 106
UAF 26	B.M.	3:02 PM	3:17PM	5.90FT	2½" BRASS DISC UP.20'± STAMPED UAF 26
F261410					WAY PT # 104
UAF 30	B.M	3:37 PM	3:52PM	5.90FT	2½" BRASS DISC - UP.10'± STAMPED UAF 30
F301411					WAY PT # 102

Book _____ Page _____

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MULTIPLE OBSERVATION GPS LOG SHEET

Job No.	Date	Day	Job Name
45-100648	5-21-02	141	UPPER AUGUA FRIA

Observer	Equip. No.	Antenna Type	Antenna Meas. Technique
M.L.W.		Compact L1L2 w/GP | wo/GP | L1L2 Geo w/GP | 4800 | Other	Edge of GP | Base | Phase Center | Other

Station No.	Name	Start Time	Stop Time	H.I.(m)	Description
File Name / Monument Location / Target Offset / Notes					
UAF12	UAF12	08:02	08:18	6.655 FT	B.M.
AF121411				POWER LINES 100' ± SE	
UAF8	UAF8	08:41	08:56	"	"
AF81412				POWER LINES 400' ± SE	
UAF2	UAF2	09:32	09:48	"	"
AF21413					
UAF3	UAF3	10:18	10:33	"	"
AF31414				.6 mi HIKE	
UAF4	UAF4	11:15	11:31	"	"
AF41415					
UAF5	UAF5	11:50	12:05	"	"
AF51415?			MAY BE MISMARKED		
UAF19	UAF19	13:08		"	"
AF191417		ABORTED - DEAD RECEIVER BATT			
UAF19	UAF19	13:22	13:37	"	"
AF191418					
UAF18	UAF18	14:20	14:35	"	"
AF181419				LONG HIKE	

Book _____ Page _____

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MULTIPLE OBSERVATION GPS LOG SHEET

Job No.	Date	Day	Job Name
45-100649	5/22/02	142	UPPER AGUA FRIA

Observer	Equip. No.	Antenna Type	Antenna Meas. Technique
M.L.W.		Compact L1L2 w/GP | wo/GP | L1L2 Geo w/GP | 4800 | Other	Edge of GP | Base | Phase Center | Other

Station No.	Name	Start Time	Stop Time	H.I.(m)	Description
File Name / Monument Location / Target Offset / Notes					
UAF15		07:22	07:37	6.655 FT	BM
AF151421					
UAF16		07:51	08:06	"	"
AF161422					
UAF17		08:16	08:31	"	"
AF171423					
UAF21		08:42	08:57	"	"
AF211424					
UAF22		09:06	09:21	"	"
AF221425					
UAF23		09:31	09:46	"	"
AF231426					
UAF20		10:10	10:25	"	"
AF201427					
UAF24		10:47	11:02	"	"
AF241428					
UAF11		11:40		"	"
AF111429			ABORTED @ 12 MINS - DEAD BATT		
UAF11		12:00	12:15	"	"
AF1114210					
UAF10		13:37	13:52	"	"
AF1014211					

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Book _____ Page _____

Sheet _____ of _____

MULTIPLE OBSERVATION GPS LOG SHEET

Job No.	Date	Day	Job Name
45-100648	5-22-2002	142	UPPER AGUA FRIA

Observer	Equip. No.	Antenna Type	Antenna Meas. Technique
KLEIN, HAYNES	9508	Compact L1L2 w/GP | wo/GP | L1L2 Geo w/GP | 4800 | Other	Edge of GP | Base | Phase Center | Other

This Unit is the: ☑ Base ☐ Rover | RTK File Name:

Station No.	Name	Start Time	Stop Time	H.I.(m)	Description
File Name / Monument Location / Target Offset / Notes					
NR22	NR22	7:22AM		5.76FT	BASE

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Book _____ Page _____

Sheet _____ of _____

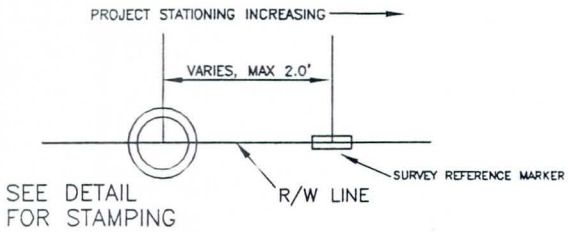
MULTIPLE OBSERVATION GPS LOG SHEET

Job No.	Date	Day	Job Name
45-100648	5-22-2002	142	UPPER AGUA FRIA

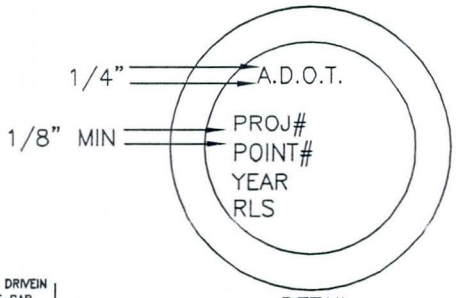
Observer	Equip. No.	Antenna Type	Antenna Meas. Technique
KLEIN, HAYNES	3702	Compact L1L2 w/GP | wo/GP | L1L2 Geo w/GP (4800) Other	Edge of GP (Base) Phase Center | Other

This Unit is the: ☐ Base ☑ Rover | RTK File Name:

Station No.	Name	Start Time	Stop Time	H.I.(m)	Description
File Name / Monument Location / Target Offset / Notes					
UAF 34	B.M.	7:42 AM	7:57 AM	5.90 FT	2 1/2" BRASS DISC STAMPED UAF 34
~~AF341421~~	~~FILE NOT FOUND~~ af 142341.dat				WAY PT #107
UAF 33	BM	8:20 AM	8:35 AM	5.90 FT	2 1/2" BRASS DISC STAMPED UAF 33
AF331422					WAY PT # 110
UAF 32	B.M.	8:48 AM	9:03 AM	5.90 FT	2 1/2" BRASS DISC UP. 10'± STAMPED UAF 32
AF321423					WAY PT # 111
UAF 31	BM	9:23 AM	9:38 AM	5.90 FT	2 1/2" BRASS DISC UP. 10'± STAMPED UAF 31
AF311424					WAY PT #112
UAF 29	BM	10:02 AM	10:17 AM	5.90 FT	2 1/2" BRASS DISC UP. STAMPED U.A.F 29
AF291425					WAY PT #108
UAF 25	B.M.	10:32 AM	10:47 AM	5.90 FT	2 1/2" BRASS DISC UP. 20'± STAMPED UAF 25
AF251426					WAY PT #109
UAF 14	BM	11:13 AM	11:18 AM	5.90 FT	2 1/2" BRASS DISC UP. STAMPED UAF 14
AF141427					WAY PT
UAF 13	BM	11:35 AM	11:50 AM	5.90 FT	2 1/2" BRASS DISC UP. 15' STAMPED UAF 13
AF131428					WAY PT 164
UAF 9	BM	11:59 AM	12:14 PM	5.90 FT	2 1/2" GLO CAP 321 UP 10'± 1917 4328
UAF101429					WAY PT -
~~UAF 6~~	~~BM~~	~~12:28 PM~~	~~VOID~~	~~5.90 FT~~	~~2 1/2" BRASS DISC UP. 40'± STAMPED UAF 6~~
~~AF6142 10~~	~~"WIND GUST DISTURBED SET UP"~~				~~WAY PT~~
UAF 6	BM	12:41 PM	12:56 PM	5.90 FT	2 1/2" BRASS DISC UP. 40'± STAMPED UAF 6
AF6142 11					WAY PT -
UAF 1	BM	2:05 PM	2:20 PM	5.90 FT	2 1/2" BRASS DISC UP STAMPED UAF 1
AF114212					WAY PT #174
UAF 7	BM	2:52 PM	3:07 PM	5.90 FT	2 1/2" BRASS DISC STAMPED UAF 7
AF714213					WAY PT #17



PLAN VIEW



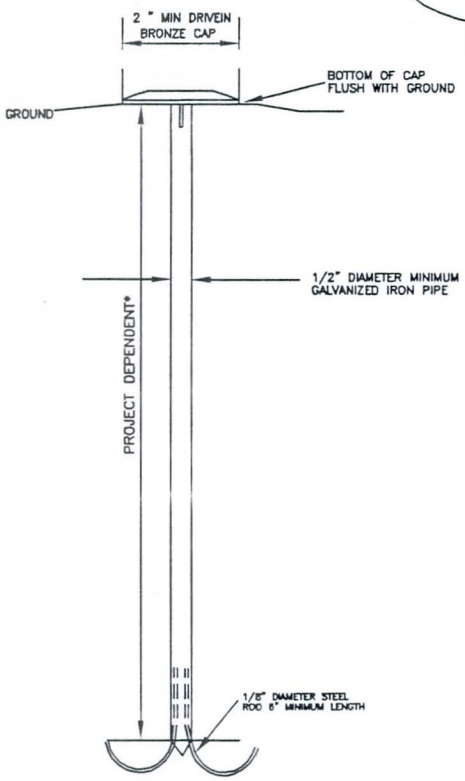
DETAIL

GENERAL NOTES

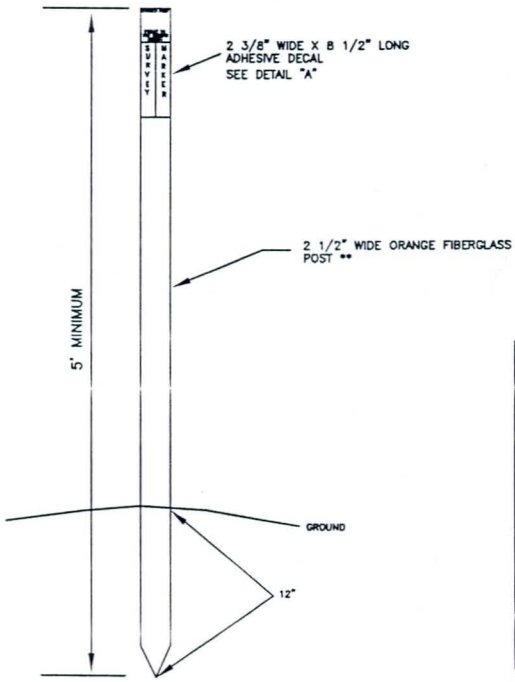
1. A RIGHT OF WAY MARKER, CONSISTING OF A SURVEY MONUMENT, CAP AND REFERENCE MARKER WITH DECAL SHALL BE CONSIDERED A UNIT.
2. ALL MARKERS SHALL BE PLACED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

* THE LENGTH OF THE MONUMENT IS DEPENDENT UPON SOIL CONDITIONS. IN BEDROCK CONDITIONS, THE CAP ONLY WILL BE SET IN THE ROCK UTILIZING EPOXY.
IN LOOSE SOIL CONDITIONS, A MINIMUM LENGTH OF 36" SHALL BE UTILIZED.

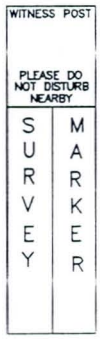
** POSTING REQUIREMENTS IN URBAN AREAS TO BE DETERMINED BY PROJECT ENGINEER.



ELEVATION VIEW
SURVEY MONUMENT



ELEVATION VIEW
REFERENCE MARKER



DETAIL "A"

RIGHT OF WAY MARKER

SURVEY OF MARICOPA CO. FLOOD CONTROL DIST - JOB NO. 45-100648 BOOK _____ PAGE _____ 1

SURVEYED BY KLEIN, HAYNES DATE 5-21-2002

WAY PT # 174

RBF CONSULTING

SETTING FLOOD CONTROL BM (U.S.F.)

UAF11412

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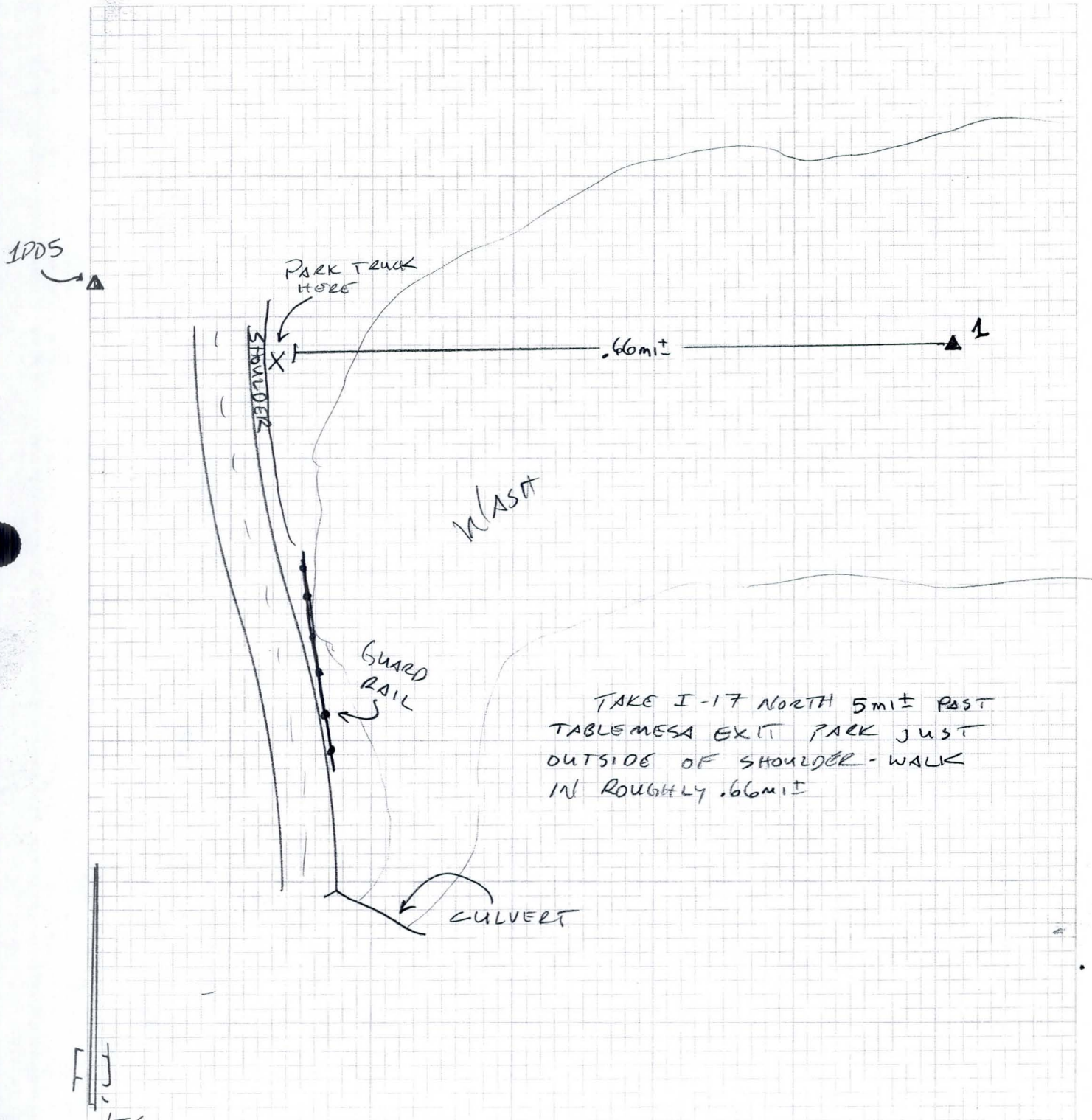

TAKE I-17 NORTH 5mi± PAST TABLEMESA EXIT PARK JUST OUTSIDE OF SHOULDER - WALK IN ROUGHLY .66mi±

BOOK_____ PAGE_____

JOB No: 45-10048

CLIENT: MARICOPA CO. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WILLIS, HAYNES

DATE: 5-20-2002

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16605 N 28th Avenue Suite 100 Phoenix Arizona 85053
(602) 467-2200 Fax (602) 467-2201

FILE NAME: AF21403

POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

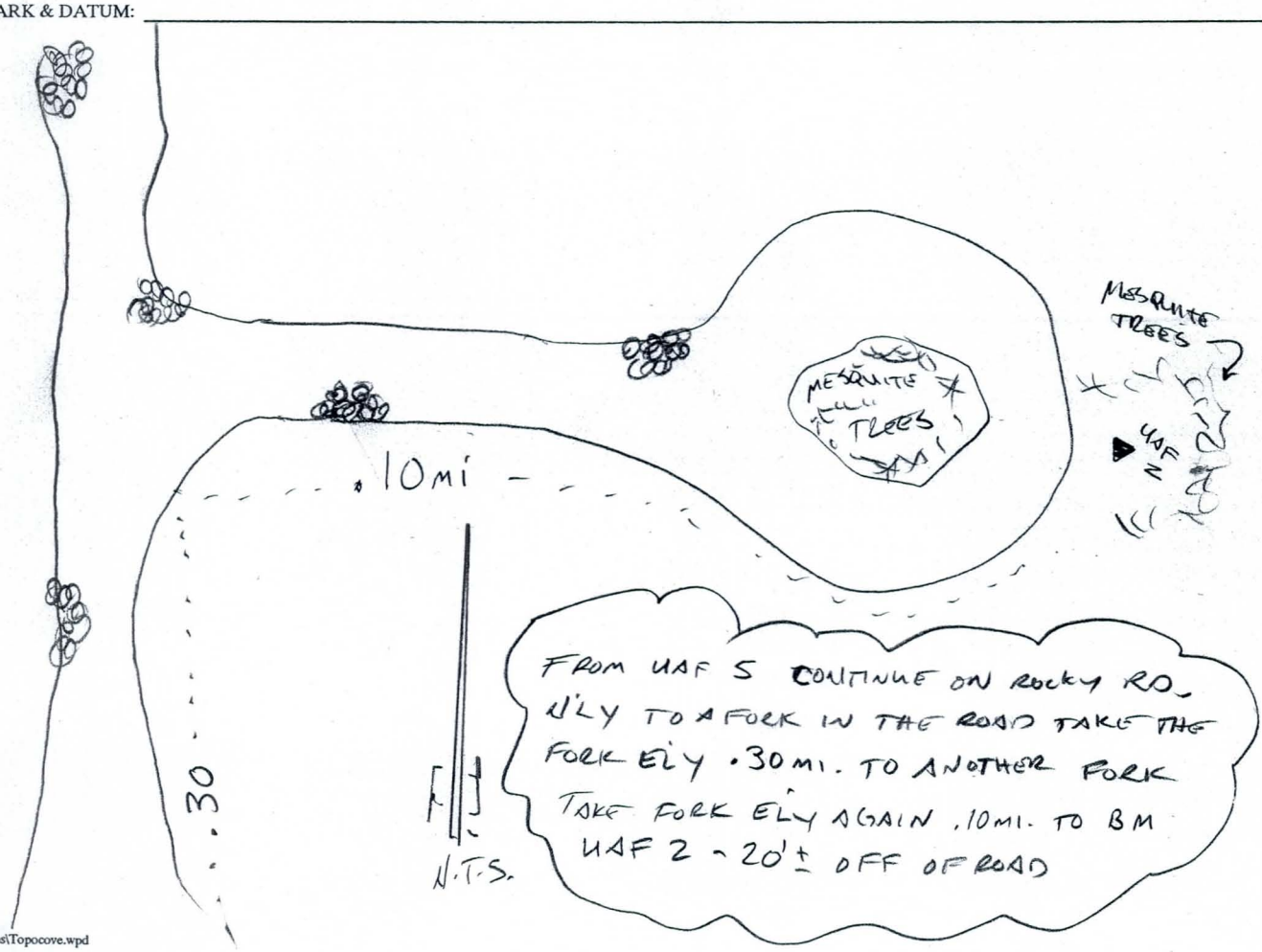
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL B.M.'s (U.A.F.)

OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC WAYPT #169 N 34-02-13 W 112-06.03

PROJECT BENCH MARK & DATUM: _____



BOOK_____ PAGE_____ 3

JOB No: 45-100648

CLIENT: MARICOPA CO. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WILLIS, HAYNES

DATE: 5-20-2002

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16605 N 28th Avenue Suite 100 Phoenix Arizona 85053
(602) 467-2200 Fax (602) 467-2201

FILE NAME: AF31404

POINT RANGE:

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

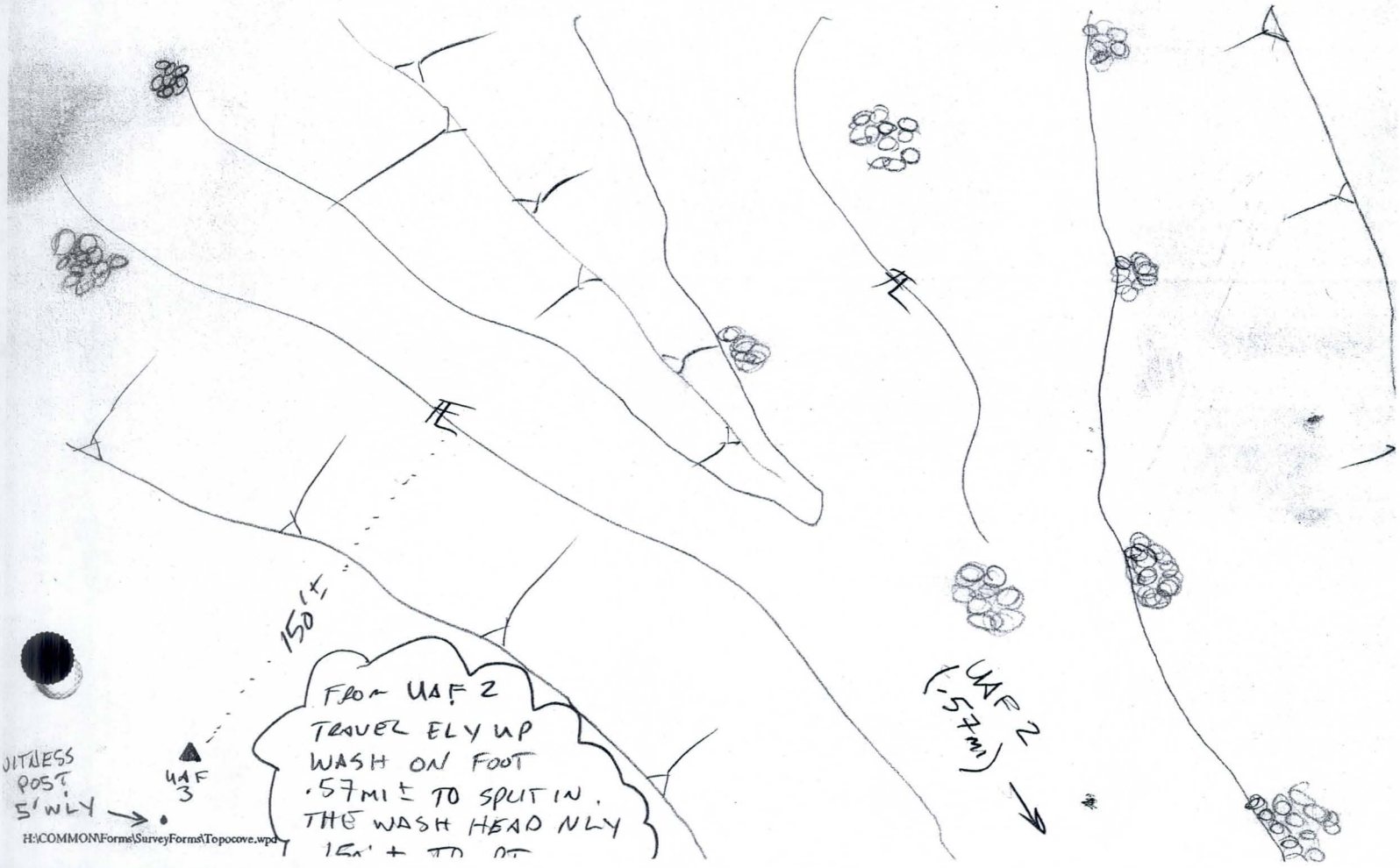
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL BM's (U.A.F.)

☐ IMPERIAL
OF HORIZONTAL CONTROL : ☐ METRIC WAYPT#170 N 34-02-20 W 112-05-33

PROJECT BENCH MARK & DATUM:



BOOK_____ PAGE_____

JOB No: 45-100648

CLIENT: MARICOPA CO. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WILLIS, HAYNES

DATE: 5-20-2002

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(602) 467-2200 Fax (602) 467-2201

FILE NAME: AF41402

POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(S) SUBDRAIN LOCATION

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

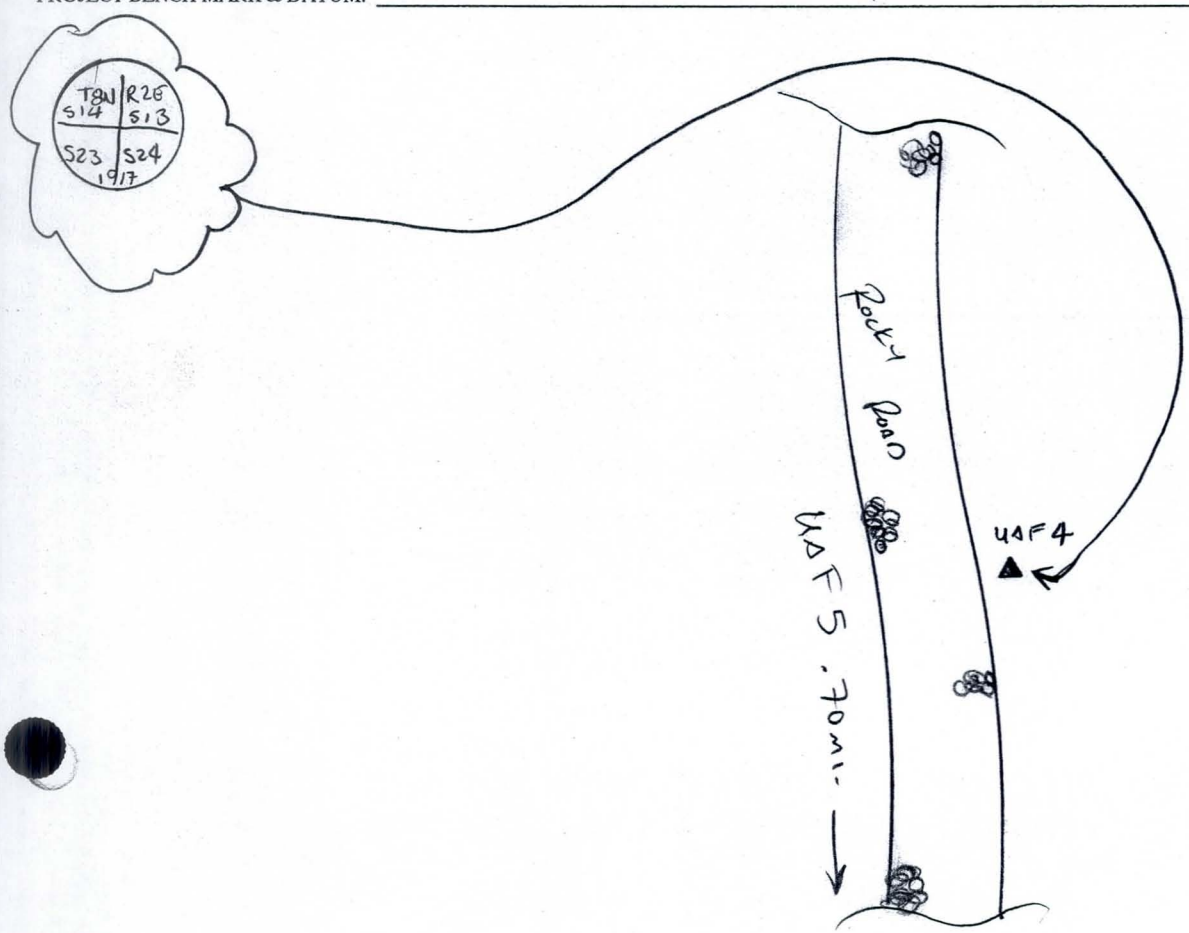
(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL B.M.'s (U.A.F.)

OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC WAY PT # 168 N 34-01-51 W 112-07-03

PROJECT BENCH MARK & DATUM: _____



BOOK_____ PAGE_____

JOB No: 45-100648

CLIENT: MARICOPA CO. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WILLIS, HAYNES

DATE: 5-20-2002

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FILE NAME: AF5140 1

POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(S) SUBDRAIN LOCATION

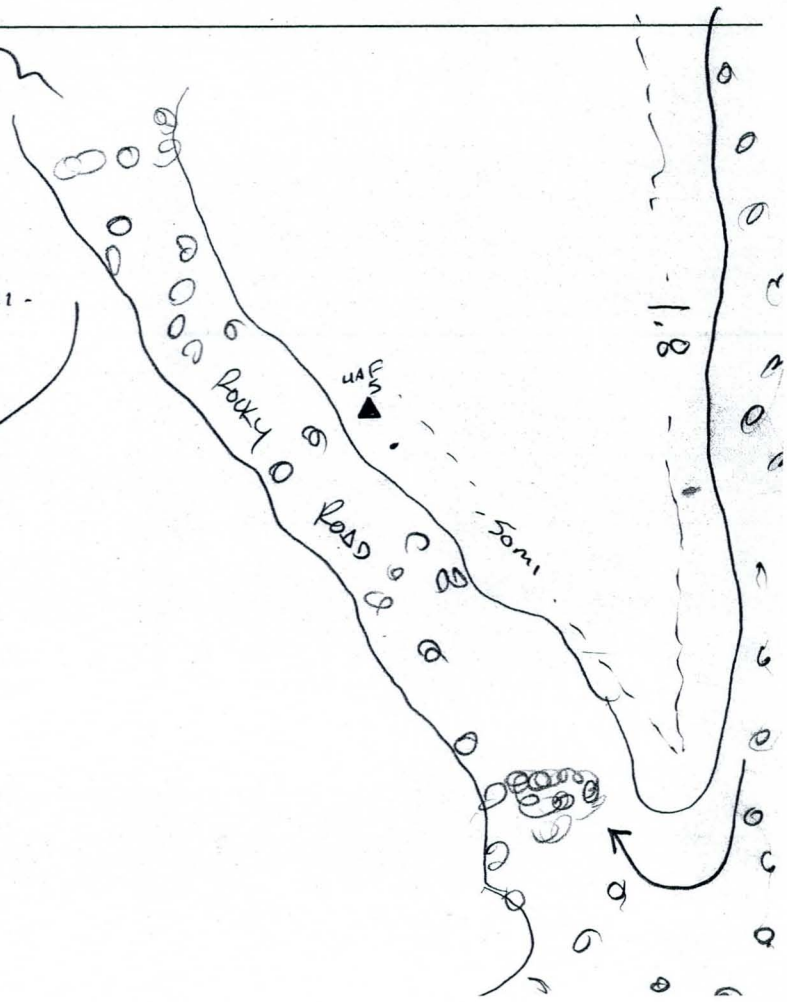
(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL BM'S (U.A.F.)

OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC ☒ WAY PT #167 N 34-01-51 W 112-06-28

PROJECT BENCH MARK & DATUM: _____

FROM UAF 23 TAKE DIRT ROAD NLY 2.8 MI TO A FORK IN THE ROAD TAKE WLY FORK 1.8 MI TO ANOTHER FORK IN ROAD TAKE A RT. DOWN THE WLY FORK .50 MI. TO UAF 5 10'± NLY OF ROAD



N.T.S.

SURVEY OF Maricopa Co Flood Control Dist JOB NO. 45-100648 BOOK _____ PAGE _____

SURVEYED BY Klein, Haynes DATE 5-21-2002

SETTING FLOOD CONTROL BM's (U.A.F.)

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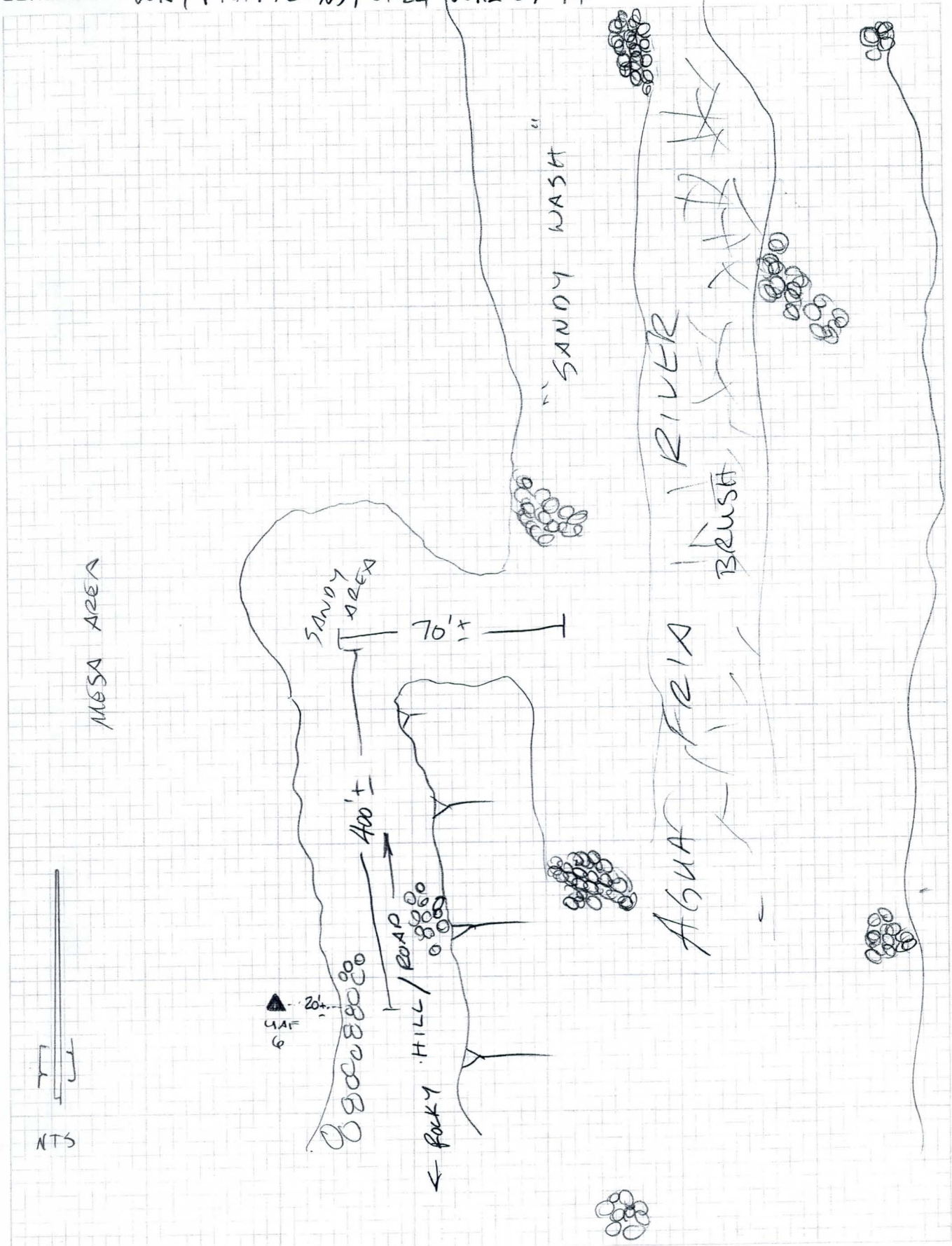
UAF61411

WAY PT#172 N34-01-24 W112-09-44



BOOK_____ PAGE_____ 7

JOB No: 45-100648

CLIENT: MARICOPA CO. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: HAYNES

DATE: 5-21-2002

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FILE NAME: UAF7143

POINT RANGE:

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(S) SUBDRAIN LOCATION

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

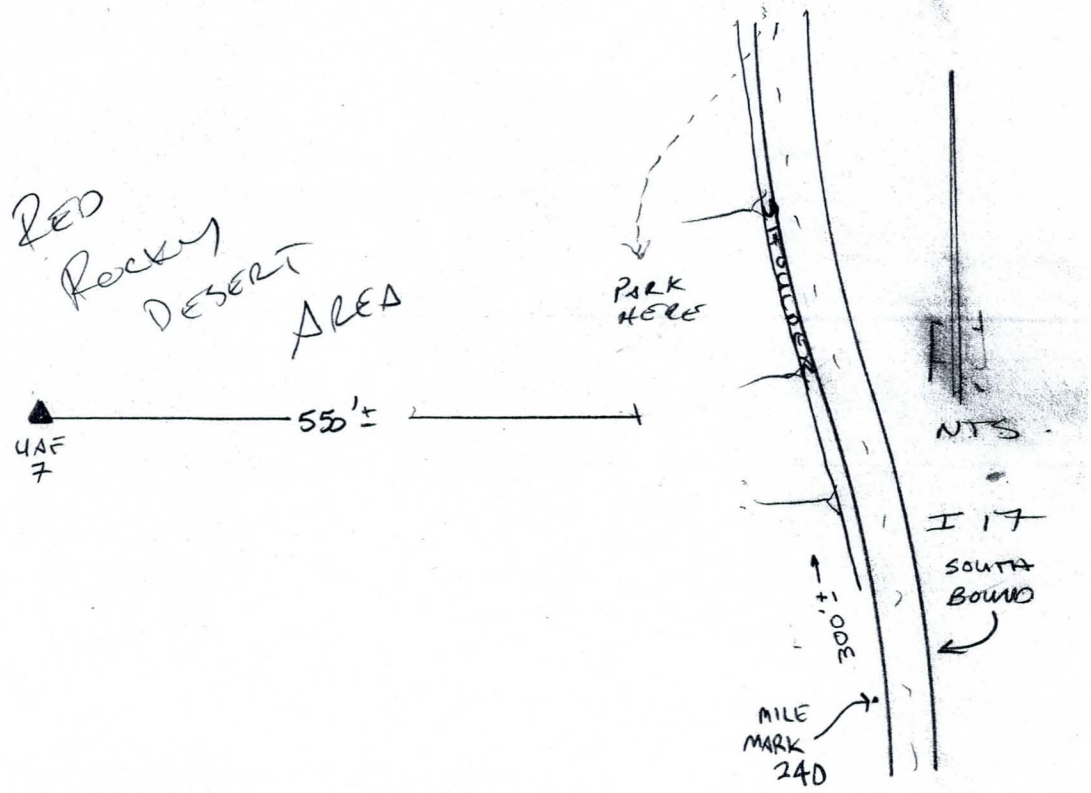
(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL BM's (U.A.F.)

☐ IMPERIAL
OF HORIZONTAL CONTROL: ☐ METRIC ~~JAY PT # 175~~ N 34-01-22 W 112-09-01

PROJECT BENCH MARK & DATUM:



BOOK_____ PAGE ~~163~~ 8

JOB No: 45-100648

CLIENT: Maricopa Co. Flood Control Dist.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: Klein

CREW: Willis

DATE: 5-17-2002

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(602) 467-2200 Fax (602) 467-2201

FILE NAME: AF81373

POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

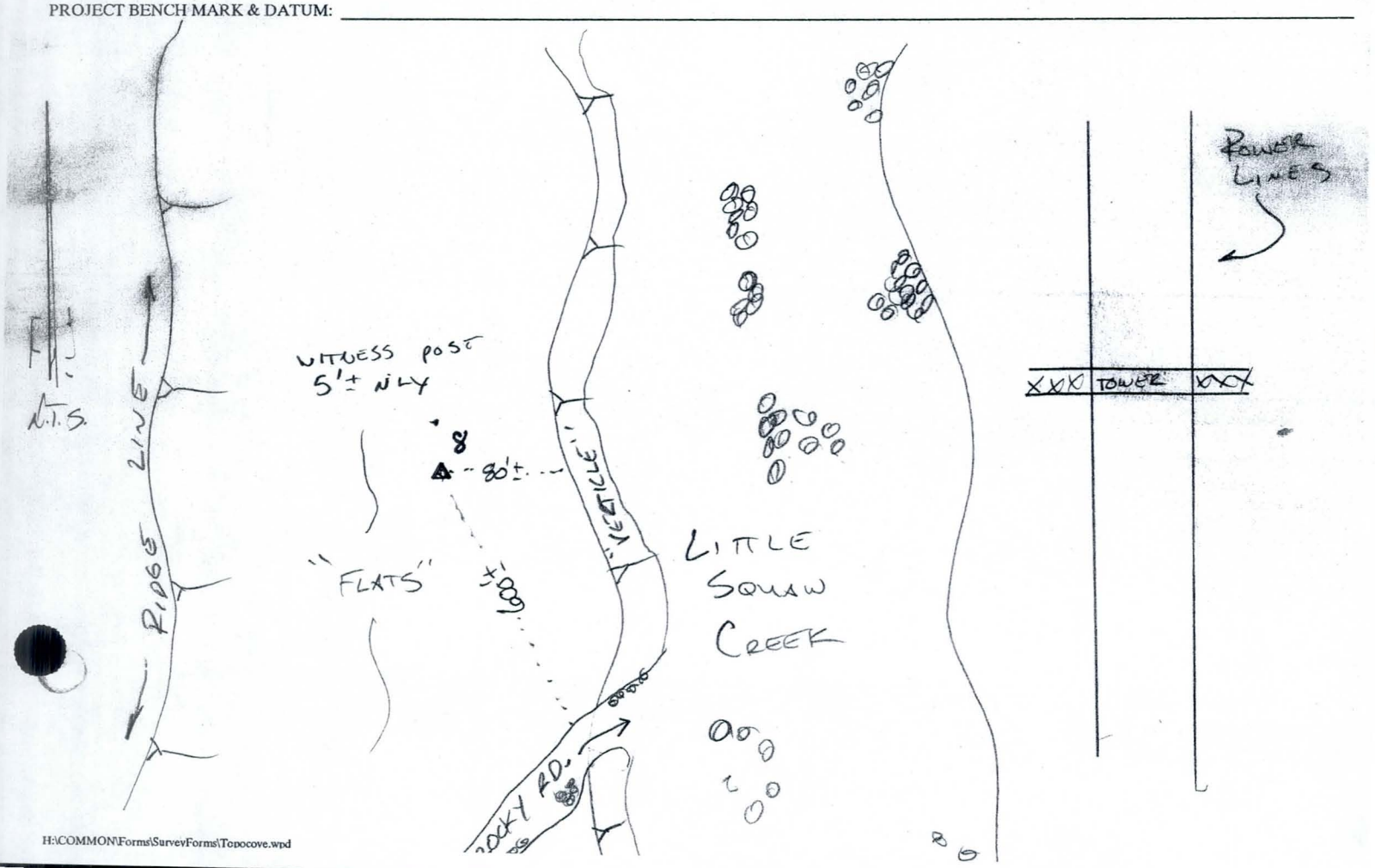
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL B.M's (U.S.F.)

OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC WAY PT #163 N 34-01-24 W 112-07-32

PROJECT BENCH MARK & DATUM: _____



BOOK_____ PAGE ~~165~~ 9

JOB No: 45-100648

CLIENT: MARICOPA CO. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WILLIS

DATE: 5-17-2002

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FILE NAME: AF91375

POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(S) SUBDRAIN LOCATION

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

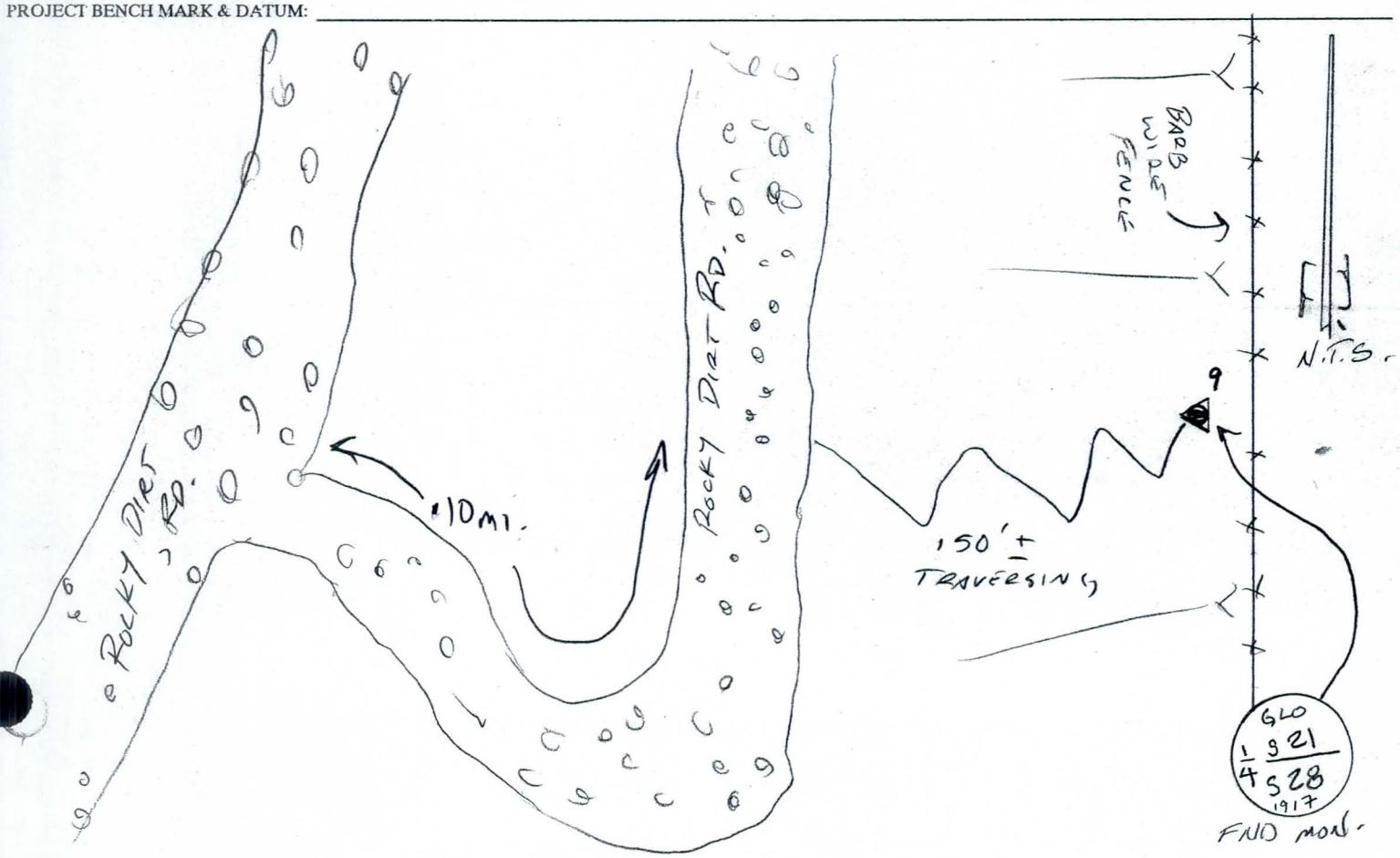
(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL B.M's (U.A.F.)

OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC WAY PT #165 N 34-00-59 W 112-09-40

PROJECT BENCH MARK & DATUM: _____



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BOOK_____ PAGE_____ 10

JOB No: 45-100648

CLIENT: MARICOPA CO. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WILLIS, HAYNES

DATE: 5-20-2002

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16605 N 28th Avenue Suite 100 Phoenix Arizona 85053
(602) 467-2200 Fax (602) 467-2201

FILE NAME: AF101406

POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

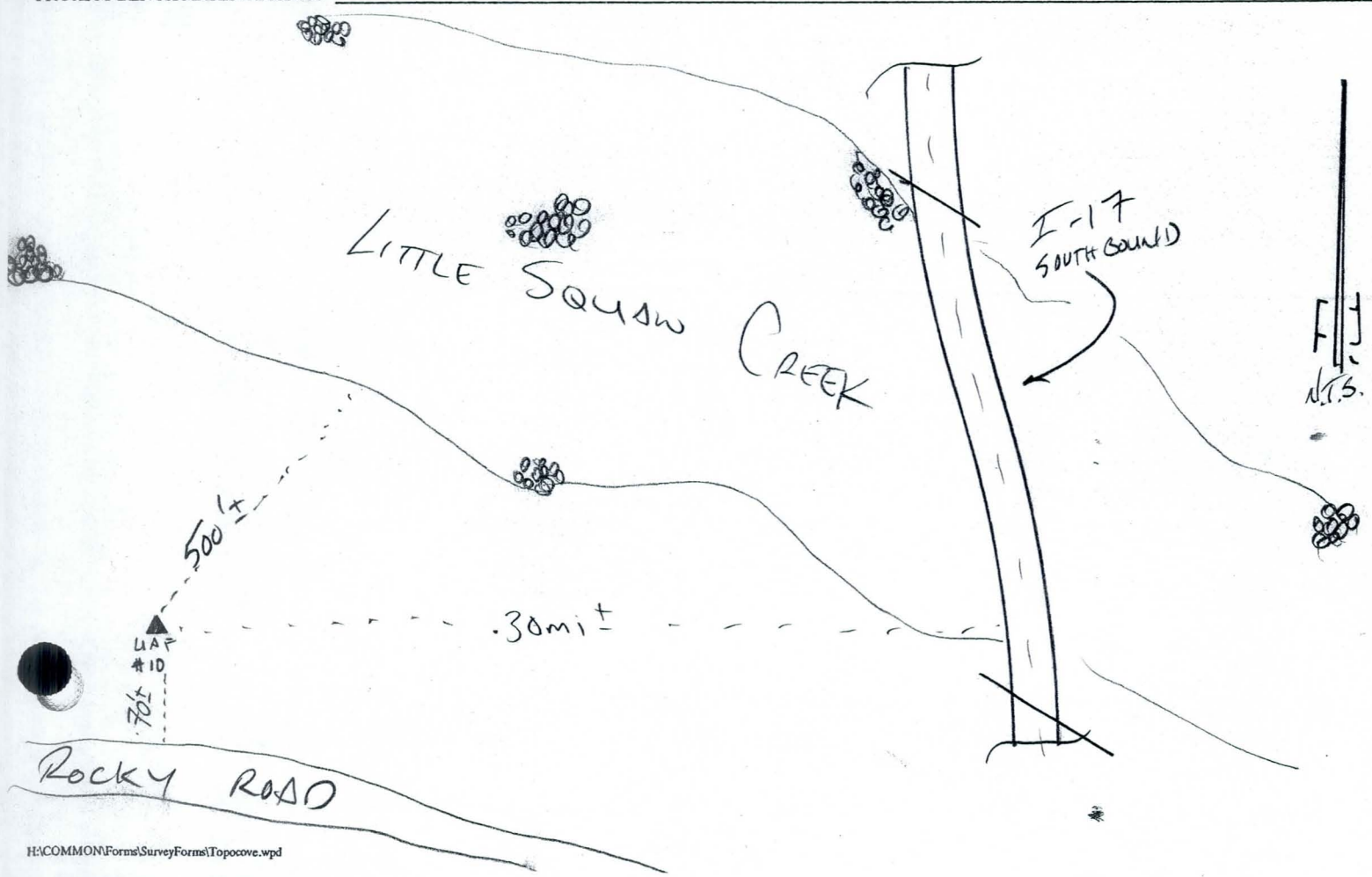
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL B.M.'S (U.A.F.)

OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC WAY PT#171 N34-00-53 W112-09-06

PROJECT BENCH MARK & DATUM: _____



BOOK_____ PAGE_____

JOB No: 45-100648
WAYPT 161

CLIENT: MARICOPA CO. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN
CREW: WILLIS
DATE: 5-17-2002

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FILE NAME: AF111371

POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(S) SUBDRAIN LOCATION

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL B.M.'S (U.A.F.)

OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC WAY PT #161 N 34-00-49 W 112-08-16

PROJECT BENCH MARK & DATUM: _____

BOOK_____ PAGE ~~162~~ 12

JOB No. 45-100648

CLIENT: MARICOPA CO. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WILLIS

DATE: 5-17-2002

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FILE NAME: AF121372

POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

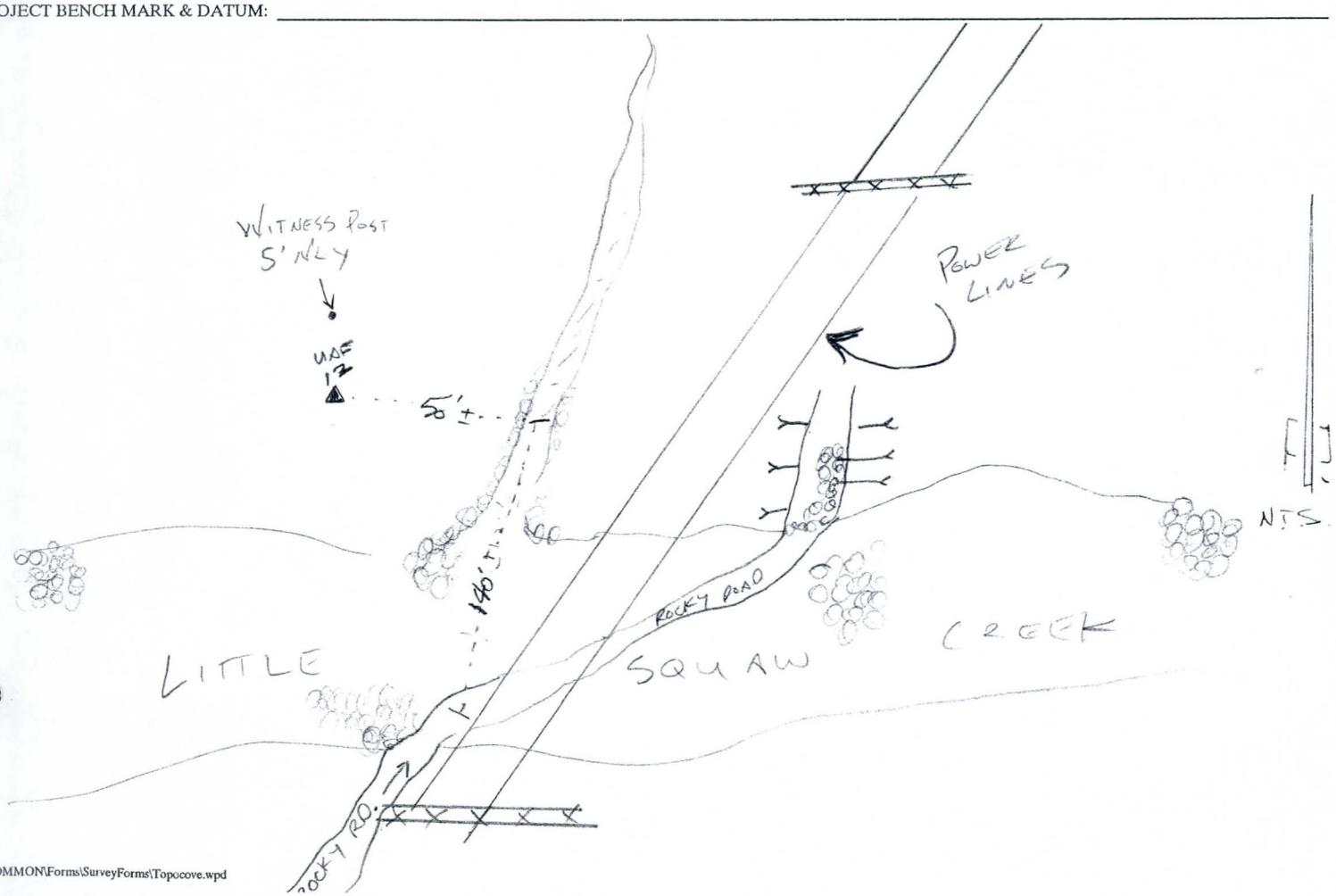
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL BM's (U.A.F.)

OF HORIZONTAL CONTROL : ☐ IMPERIAL ☐ METRIC ~~WAY PT #162~~ N34-01-03 W112-07-48

PROJECT BENCH MARK & DATUM: _____



BOOK_____ PAGE ~~164~~ 13

JOB No: 45-100648

CLIENT: MARICOPA CO. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WASHICKO

DATE: 5-17-2002

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FILE NAME: AF131374

POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

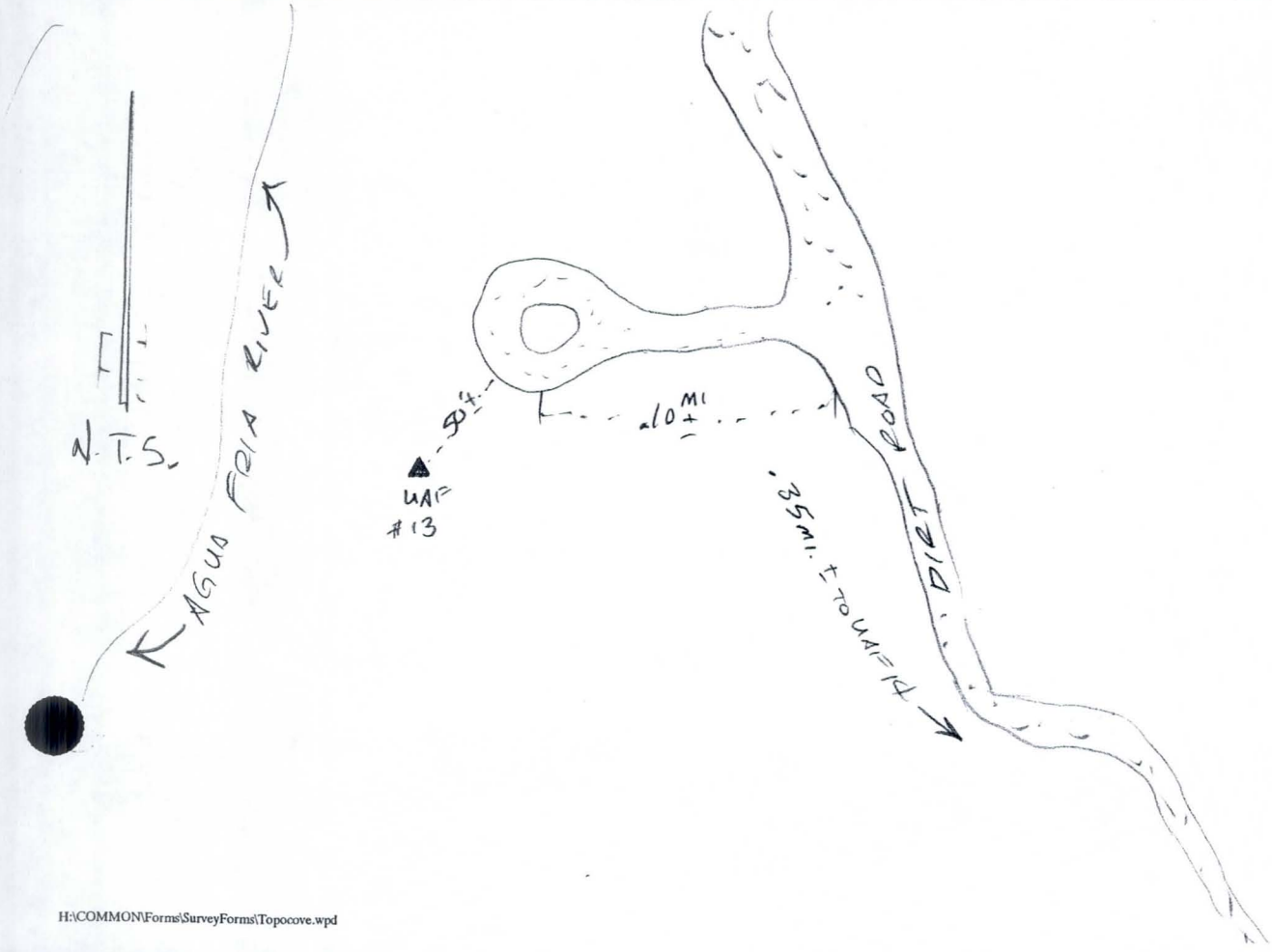
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL BM's (U.A.F.)

OF HORIZONTAL CONTROL : ☐ IMPERIAL ☐ METRIC WAY PT #164 N 34-00-37 W 112-09-32

PROJECT BENCH MARK & DATUM: _____



BOOK_____ PAGE ~~160~~ 14

JOB No: 45-100640

CLIENT: MARICOPA CO. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WASHICKO

DATE: 5-16-2002

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FILE NAME: 1PDS136B

POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

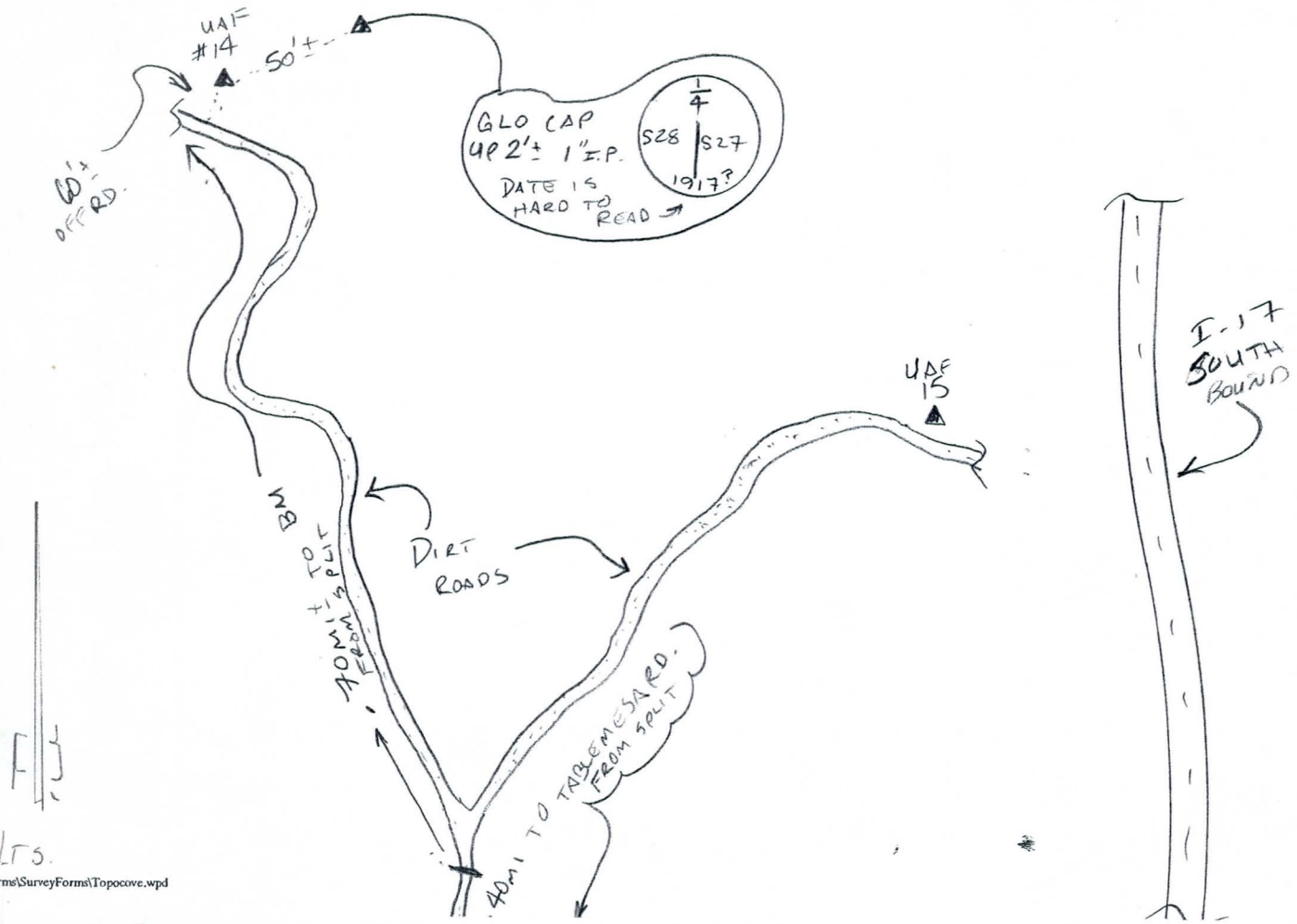
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL B.M.'S (U.A.F.)

☐ IMPERIAL
OF HORIZONTAL CONTROL : ☐ METRIC ~~WA 1 PT. #160~~ N 34-00-32 W112-09-08

ECT BENCH MARK & DATUM: _____



NTS.

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BOOK_____ PAGE ~~45~~ 1

JOB No: 45-100648

CLIENT: MARICOPA CO. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WILLIS, WASHICKO

DATE: 5-15-2002

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FILE NAME: ~~1PDS135B~~

POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

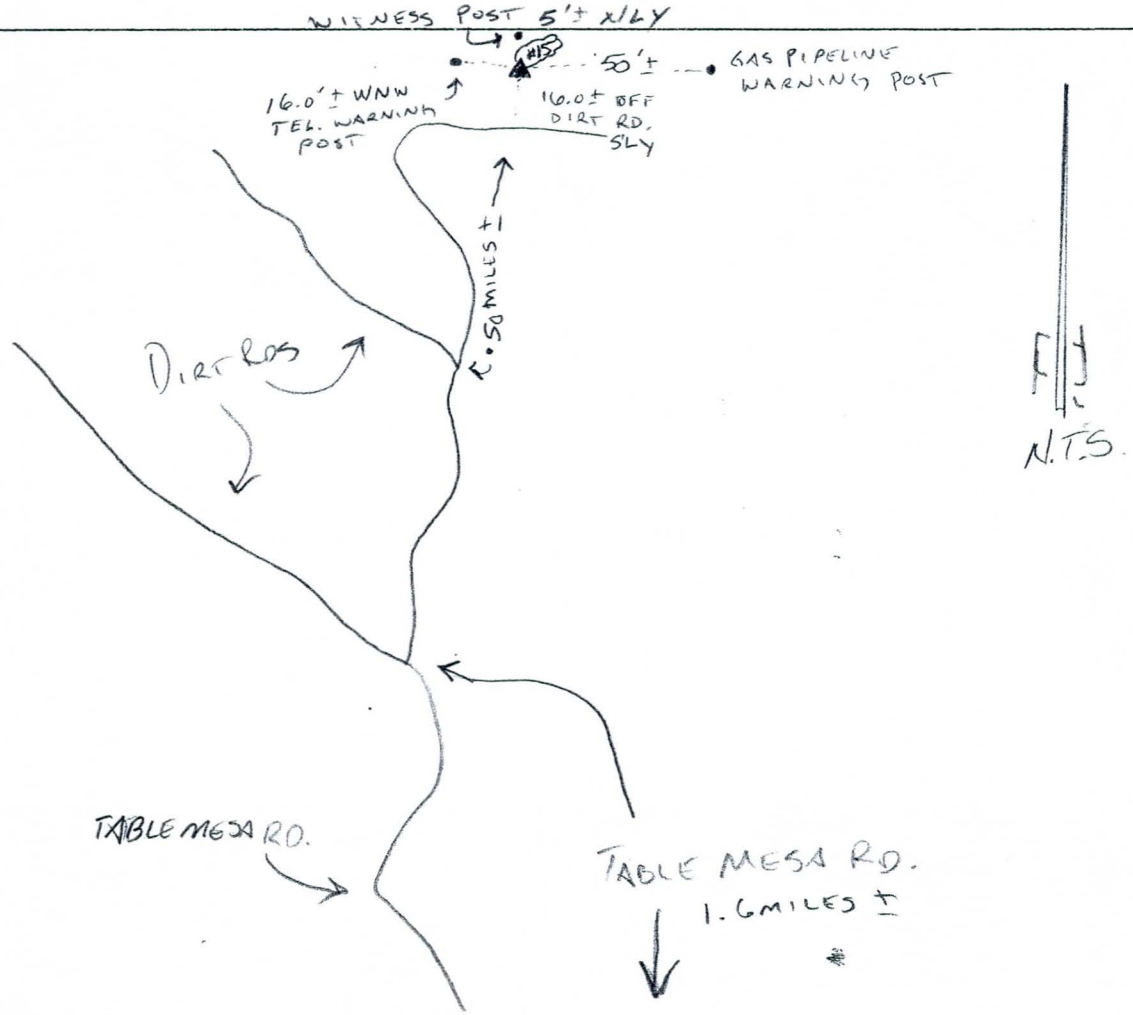
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL BENCH MARKS (U.A.F.)

OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC ~~WAYPT #113~~ N 34-00-16 W 112-08-35

PROJECT BENCH MARK & DATUM: WITNESS POST 5'± N'LY



BOOK_____ PAGE _____ ~~17~~ 11

JOB No: 45-100648

CLIENT: MARICOPA CO. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEW

CREW: WILLIS, WASHICKO

DATE: 5-15-2002

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(602) 467-2200 Fax (602) 467-2201

FILE NAME: ~~1PDS1353~~

POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

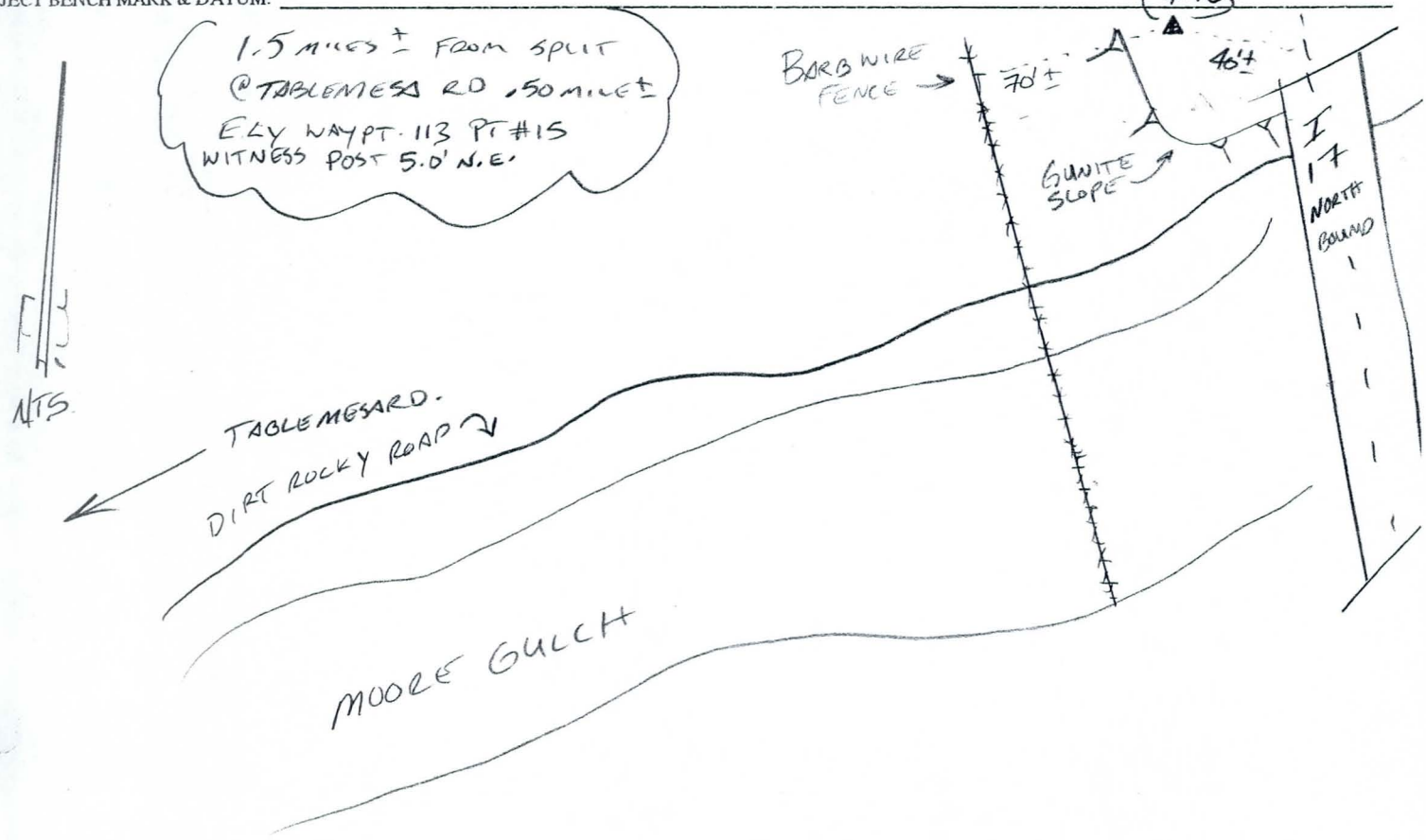
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL BENCH MARKS (U.A.I.F.)

☐ IMPERIAL
F HORIZONTAL CONTROL : ☐ METRIC ~~WAY PT #114~~ N 34-00-00 W 112-08 -03

PROJECT BENCH MARK & DATUM: _____



~~105~~ 17

BOOK_____ PAGE_____

JOB No: 45-100648

CLIENT: MARICOPA CO. FLOOD CONTROL DIST

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WILLIS, WASHICKO

DATE: 5-16-2002

RBF CONSULTING

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PLANNING DESIGN CONSTRUCTION
16605 N 28th Avenue Suite 100 Phoenix Arizona 85053
(602) 467-2200 Fax (602) 467-2201

FILE NAME: 1PD5136B SESSION 1

POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

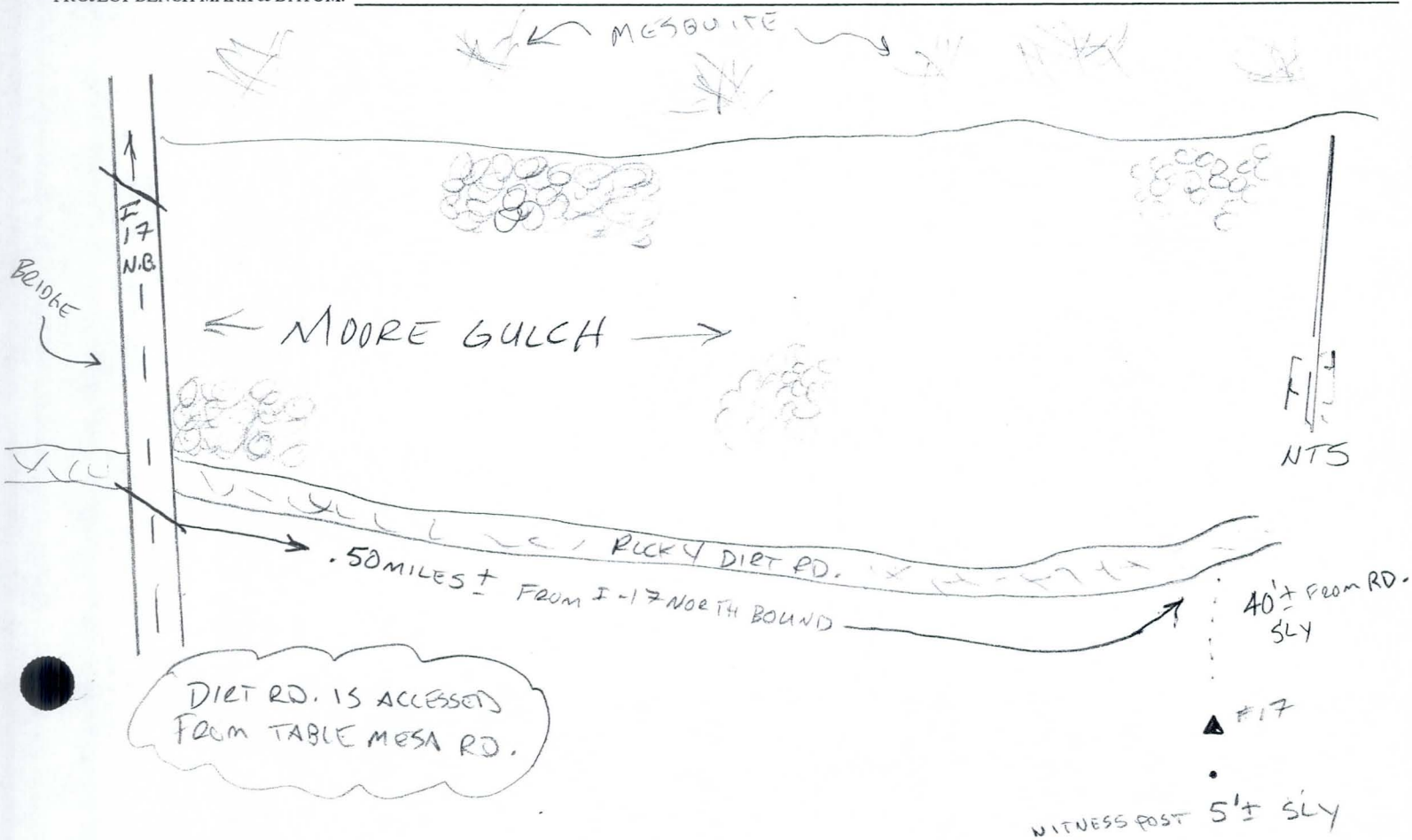
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL BM.'S (U.A.F.)

OF HORIZONTAL CONTROL : ☐ IMPERIAL ☐ METRIC ~~WAYPT #153~~ N33-59-49 W112-07-36

PROJECT BENCH MARK & DATUM: _____



~~T85~~ 18

BOOK_____ PAGE_____

JOB No: 45-100648

CLIENT: MARICOPA CO. FLOOD CONTROL DIST

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WILLIS, WASHICKO

DATE: 5-16-2002

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RBF CONSULTING
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(602) 467-2200 Fax (602) 467-2201

FILE NAME: 1PDS136B

POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

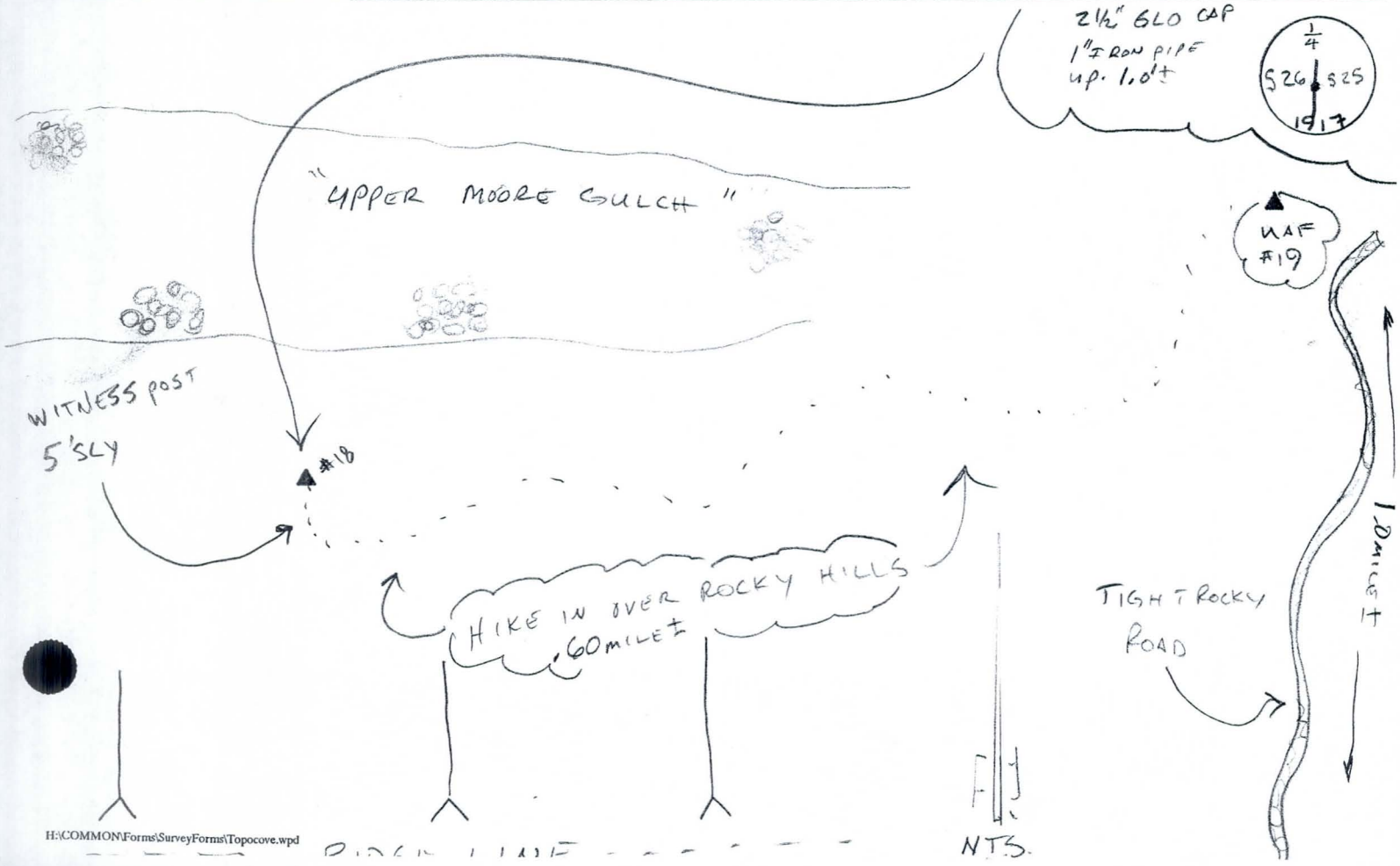
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL BENCH MARKS (U.A.F.)

OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC ~~MAT PT #155~~ 34-00-32 W112-07-02

PROJECT BENCH MARK & DATUM: _____



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~~154~~ 11

BOOK_____ PAGE_____

JOB No: 45-106648

CLIENT: MARICOPA CO. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WILLIS, WASHICKO

DATE: 5-16-2002

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PLANNING DESIGN CONSTRUCTION
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(602) 467-2200 Fax (602) 467-2201

FILE NAME: 1PD5136B

POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

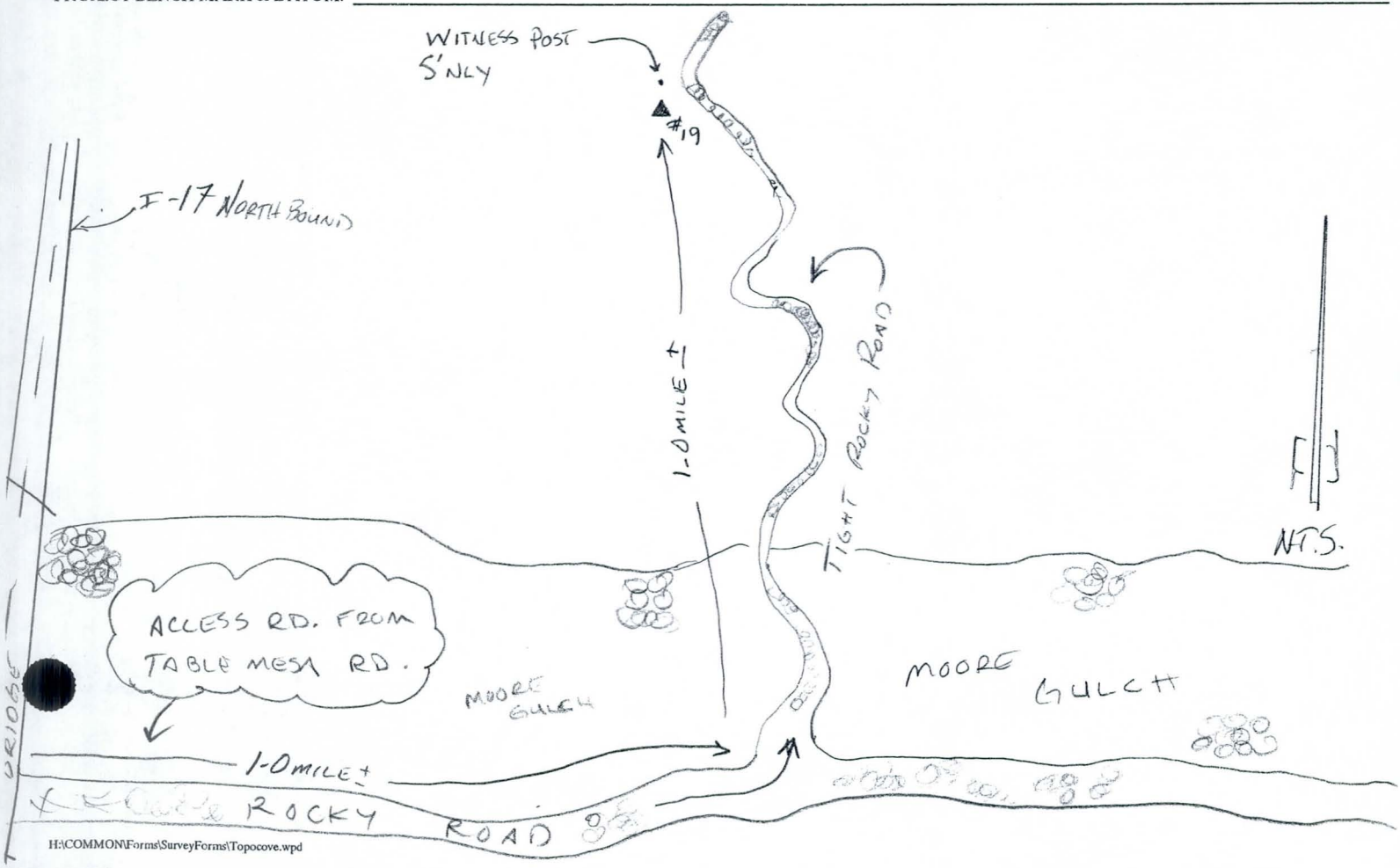
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL BM'S (U.A.F.)

OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC ~~WAY PT # 154 A~~ 34-00-24 W 112-06-25

PROJECT BENCH MARK & DATUM: _____



BOOK_____ PAGE ~~157~~ 26

JOB No: 45-100648

CLIENT: MARICOPA CO FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WASHICKO

DATE: 5-16-2002

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16605 N 28th Avenue Suite 100 Phoenix Arizona 85053
(602) 467-2200 Fax (602) 467-2201

FILE NAME: 1PD5136B

POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

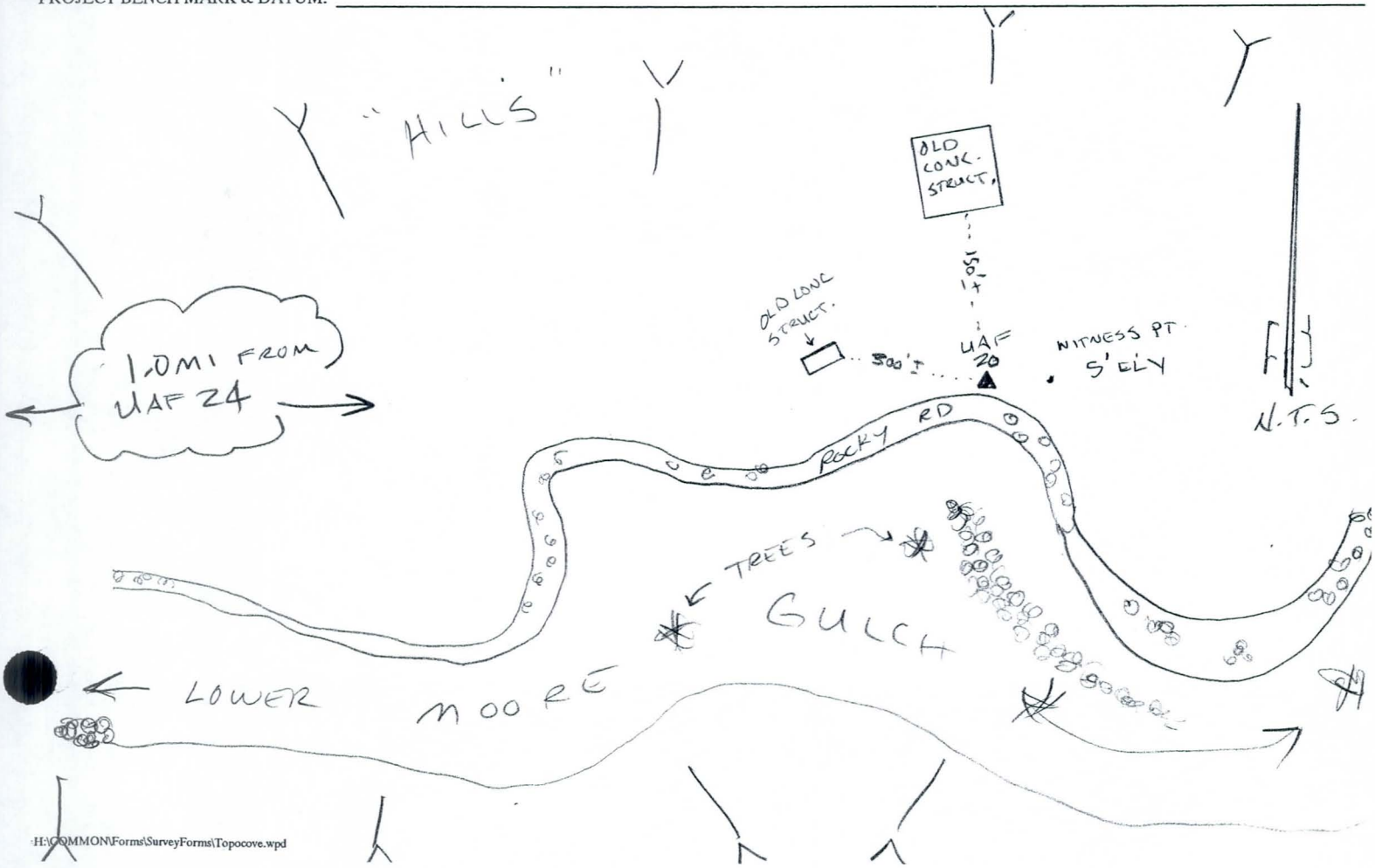
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL B.M.'S (U.A.F.)

OF HORIZONTAL CONTROL : ☐ IMPERIAL ☐ METRIC ~~UAF PT #159~~ N 34-00-34 W 112-04-58

PROJECT BENCH MARK & DATUM: _____



SURVEY OF Maricopa Co. Flood Control Dist JOB NO. 45-100648 BOOK _____ PAGE ~~123~~ 21

SURVEYED BY Klein, Willis, Washicko DATE 5-15-2002

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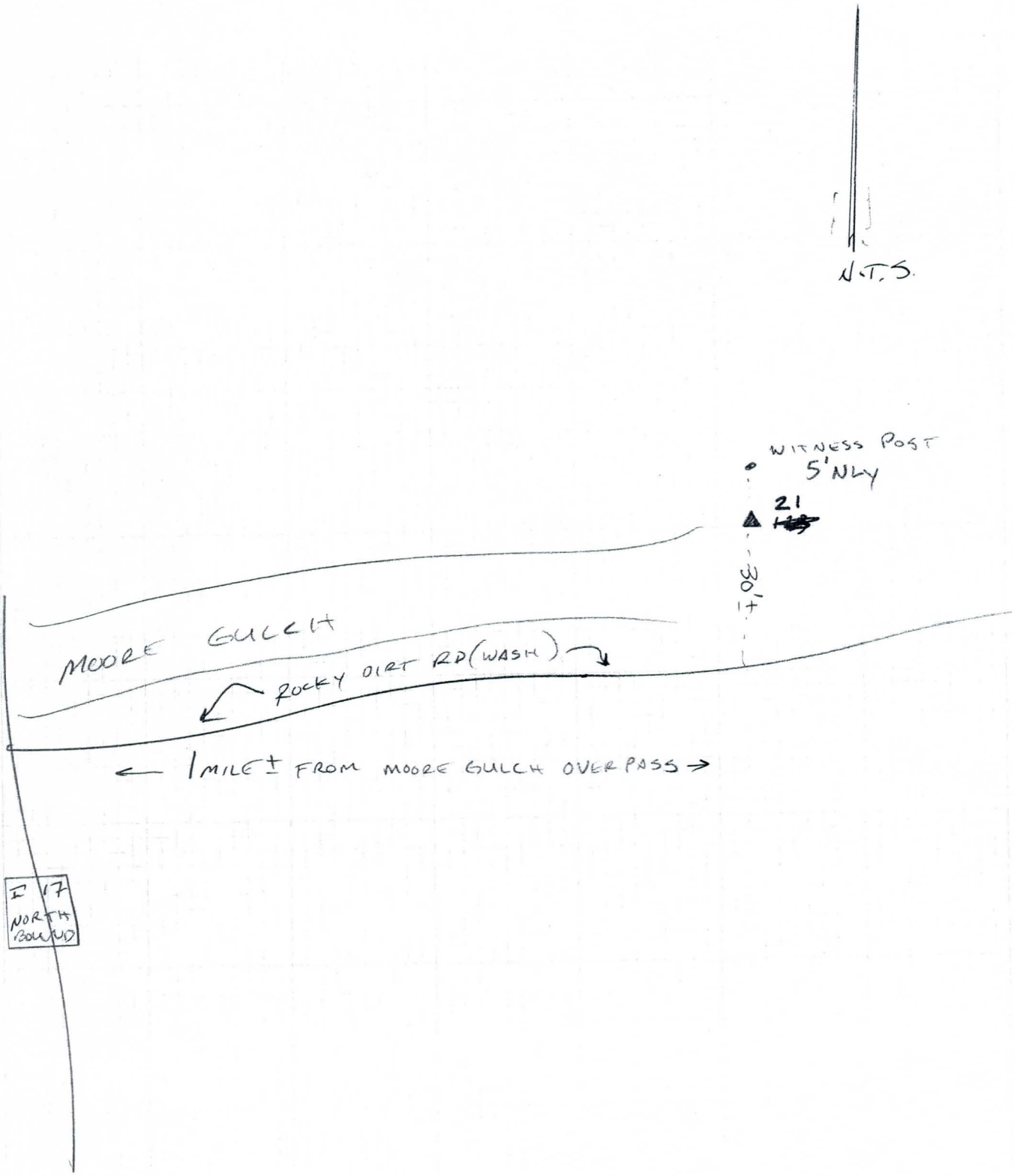
WAY PT #123 N 33-59-48 W 112-07-04

FILE: ~~1PD5135B~~



SURVEY OF MARICOPA CO. FLOOD CONTROL DIST JOB NO. 45-100648 BOOK _____ PAGE ~~1~~ 22

SURVEYED BY KLEIN, WILLIS, WASHICKO DATE 5-15-2002

SETTING FLOOD CONTROL B.M.'S (U.A.F.)

RBF CONSULTING

WAY PT # 151 N 33-59-41
W 112-06-31

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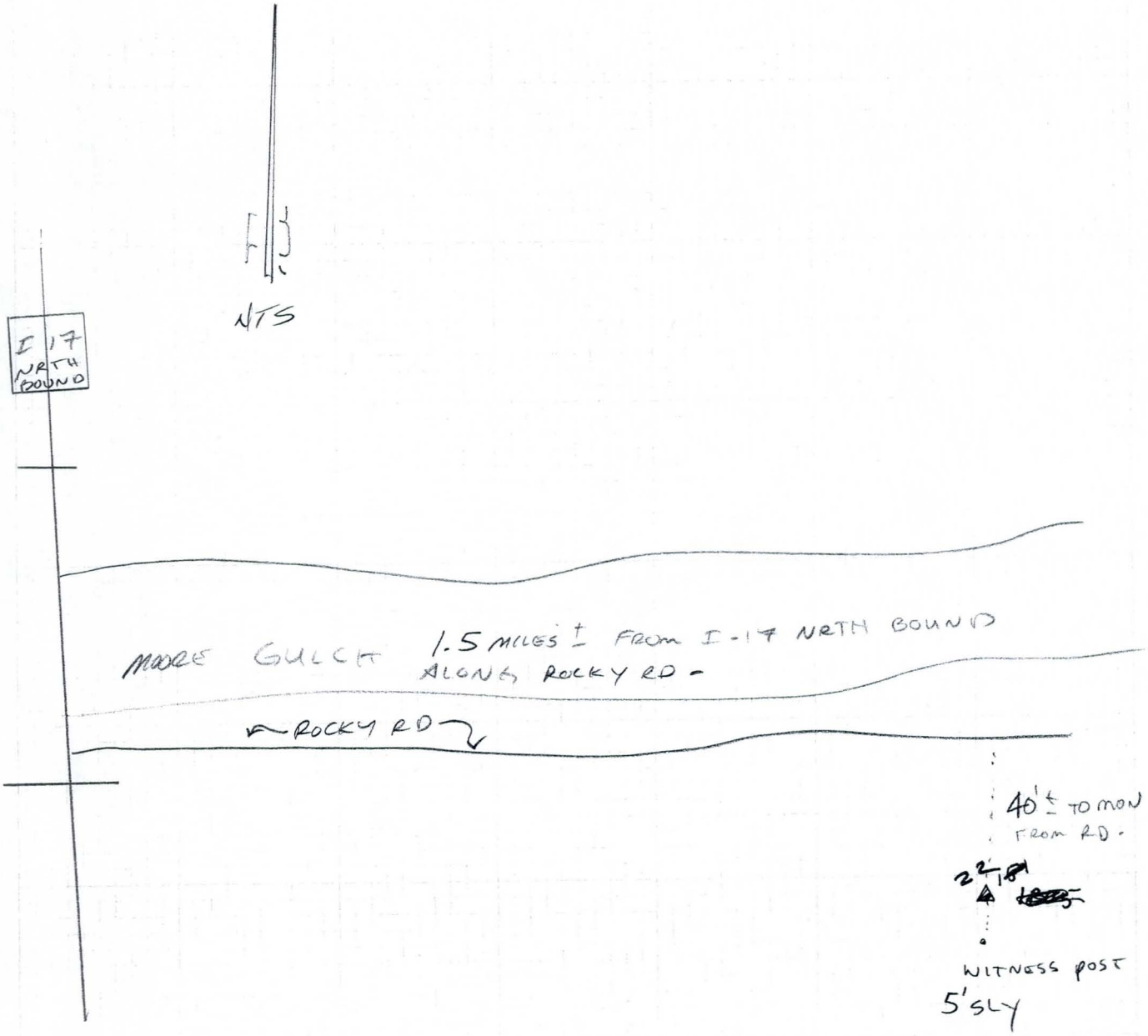
FILE: ~~1PD513SB~~



SURVEY OF Maricopa Co. Flood Control Dist. JOB NO. 45-100648 BOOK _____ PAGE _____

SURVEYED BY Klein, Willis, Washicko DATE 5-15-2002

SETTING FLOOD CONTROL B.M.'S (U.A.F.)

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WAY PT. #152 N 33-59-42
W 112-06-03

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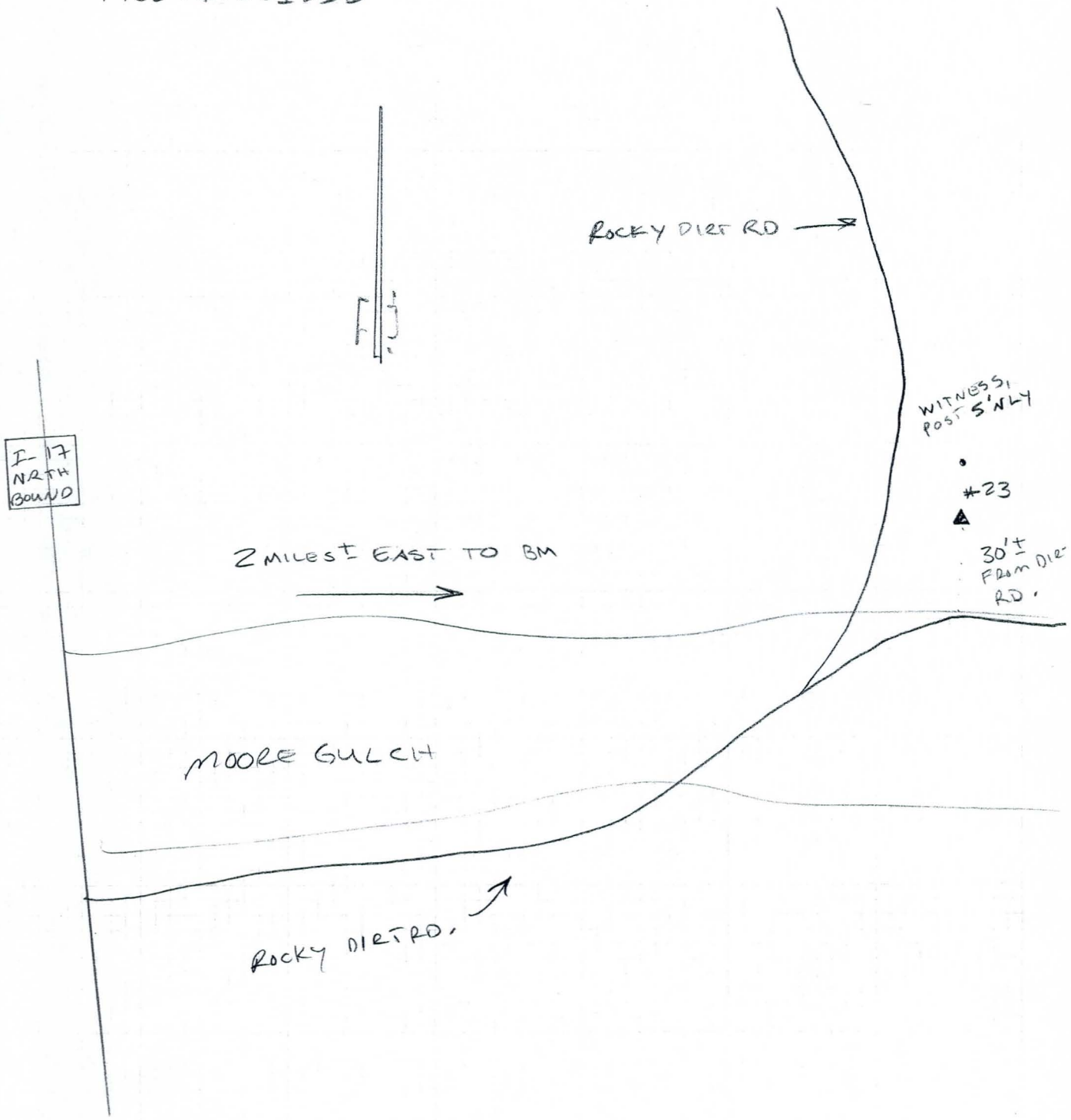
~~FILE: 1PD5135B~~



~~1508~~ 2

BOOK_____ PAGE_____

JOB No: 45-100648

CLIENT: MARICOPA CO. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WASHICKO

DATE: 5-16-2002

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FILE NAME: 1PD5136 B

POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

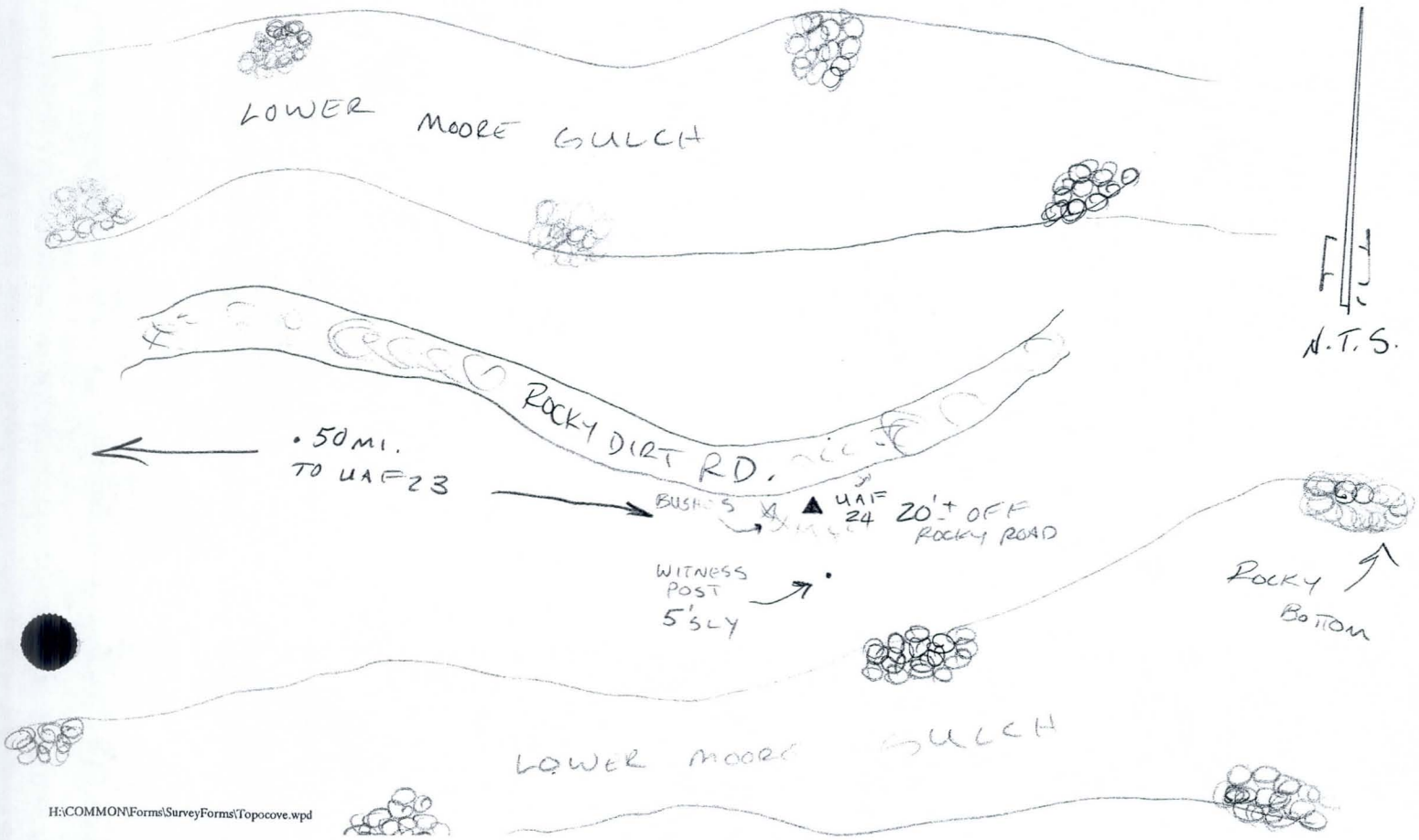
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL B.M.'S (U.A.F.)

OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC WAY PT #158 N 33-59-56 W 112-05-28

PROJECT BENCH MARK & DATUM: _____



BOOK_____ PAGE_____

JOB No: 45-100648

CLIENT: MARICOPA CO. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WILLIS, WASHICKO

DATE: 5-15-2002

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FILE NAME: ~~4PD5135B~~

POINT RANGE:

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(S) SUBDRAIN LOCATION

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

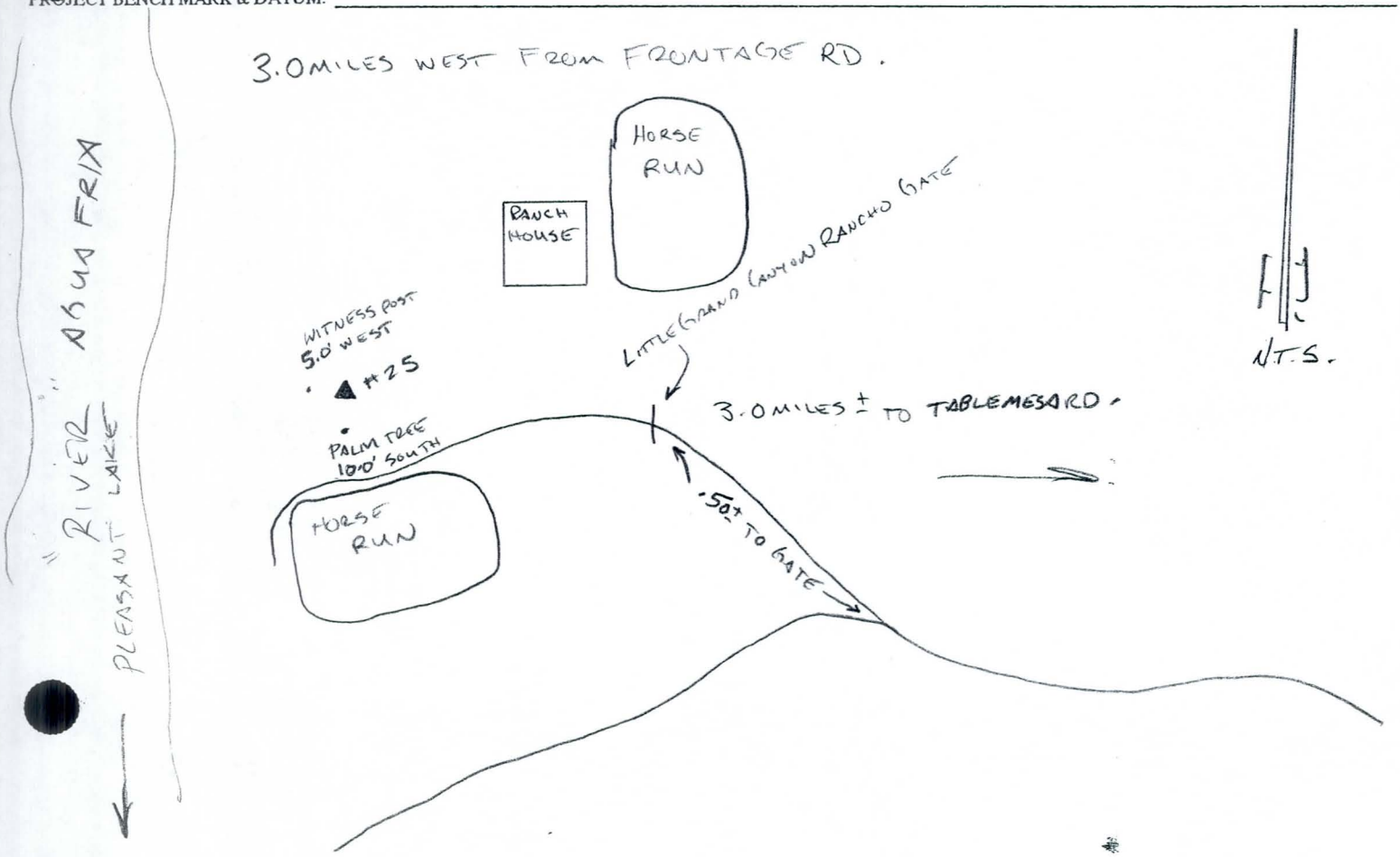
(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL BENCH MARKS (U.A.F.)

☐ IMPERIAL
F HORIZONTAL CONTROL : ☐ METRIC ~~WAY PT. #109~~ N 33-59-18 W 112-11-34

PROJECT BENCH MARK & DATUM:



BOOK_____ PAGE_____

JOB No: 45-100648

CLIENT: MARICOPA Co. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WILLIS, WASHICKO

DATE: 5-14-2002

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16605 N 28th Avenue Suite 100 Phoenix Arizona 85053
(602) 467-2200 Fax (602) 467-2201

FILE NAME: ~~IPDS1348~~

POINT RANGE:

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

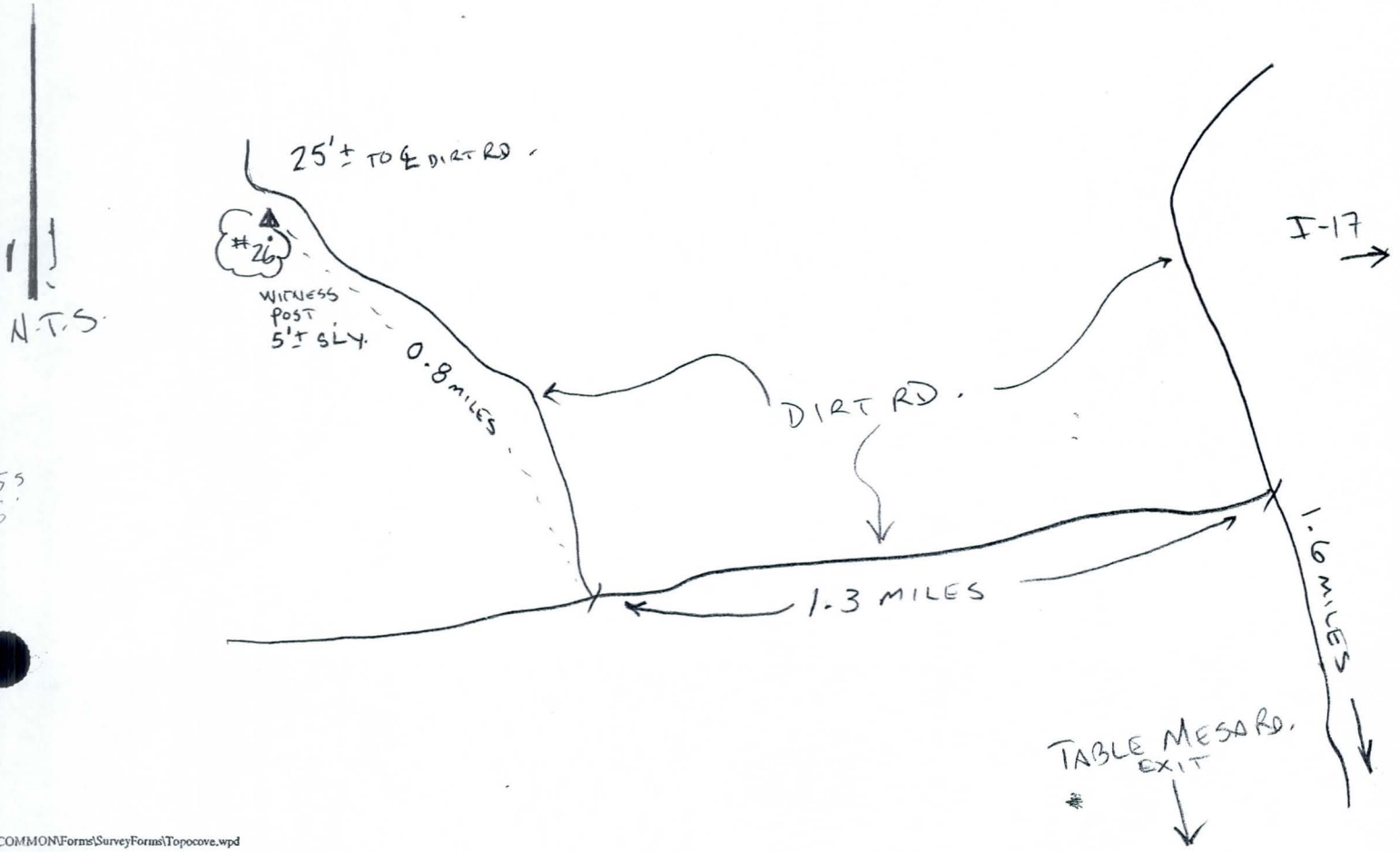
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL BENCH MARKS (U.A.F.)

☐ IMPERIAL
F HORIZONTAL CONTROL : ☐ METRIC ~~WAY PT #104~~ N 33-59-33 W 112-10-37

PROJECT BENCH MARK & DATUM:



55
25

BOOK_____ PAGE ~~106~~ 2

JOB No: 45-100648

CLIENT: MARICOPA CO FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WILLIS, WASHICKO

DATE: 5-14-2002

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16605 N 28th Avenue Suite 100 Phoenix Arizona 85053
(602) 467-2200 Fax (602) 467-2201

FILE NAME: ~~1P051348~~

POINT RANGE:

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

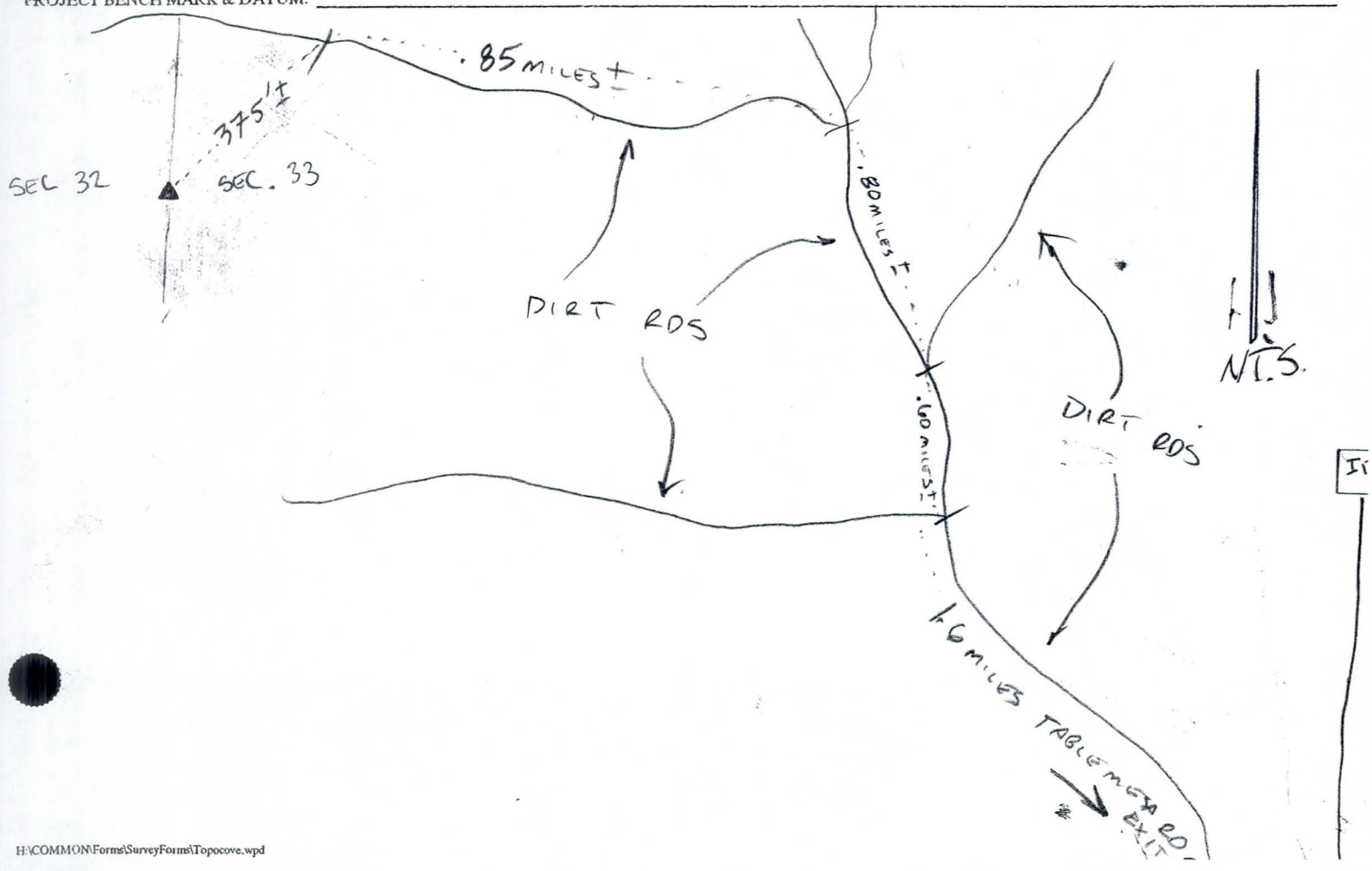
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL BENCH MARKS (U.A.F.)

OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC ~~WAY PT. #106~~ N33-59-37 W 112-10-11

PROJECT BENCH MARK & DATUM:



BOOK_____ PAGE_____

JOB No: 45-1006648

CLIENT: MARICOPA Co. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WILLIS, WASHICKO

DATE: 5-14-2002

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FILE NAME: ~~1PD51348~~

POINT RANGE:

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(S) SUBDRAIN LOCATION

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

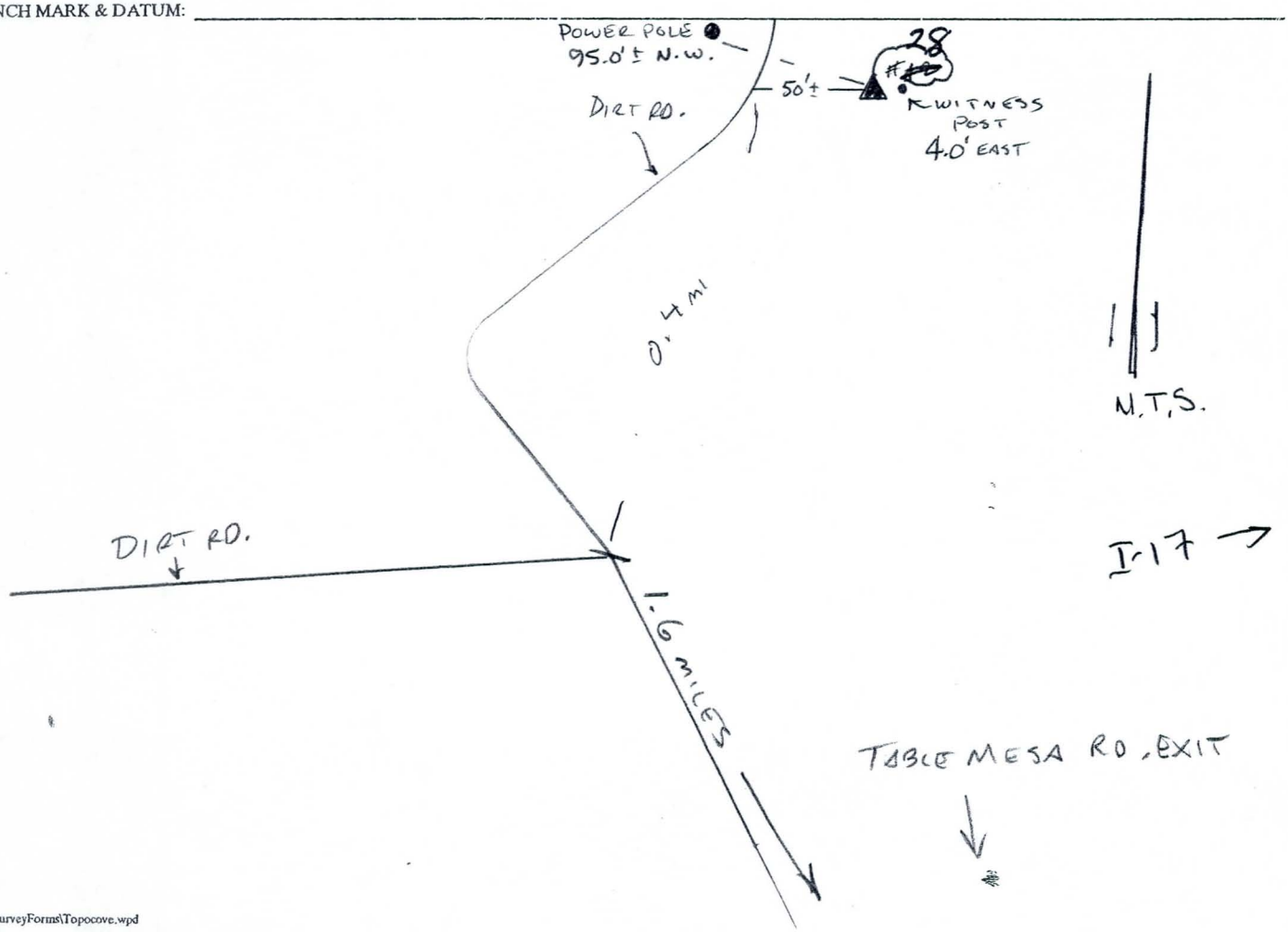
(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL BENCHMARKS (U.A.F.)

OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC ~~WAY PT. 42~~ N 33-59-26 W 112-08-51

PROJECT BENCH MARK & DATUM:



~~104~~ 2

BOOK_____ PAGE_____

JOB No: 45-100648

CLIENT: MARICOPA CO FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WILLIS, WASHICKO

DATE: 5-15-2002

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(602) 467-2200 Fax (602) 467-2201

FILE NAME: ~~1PDS135B~~

POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

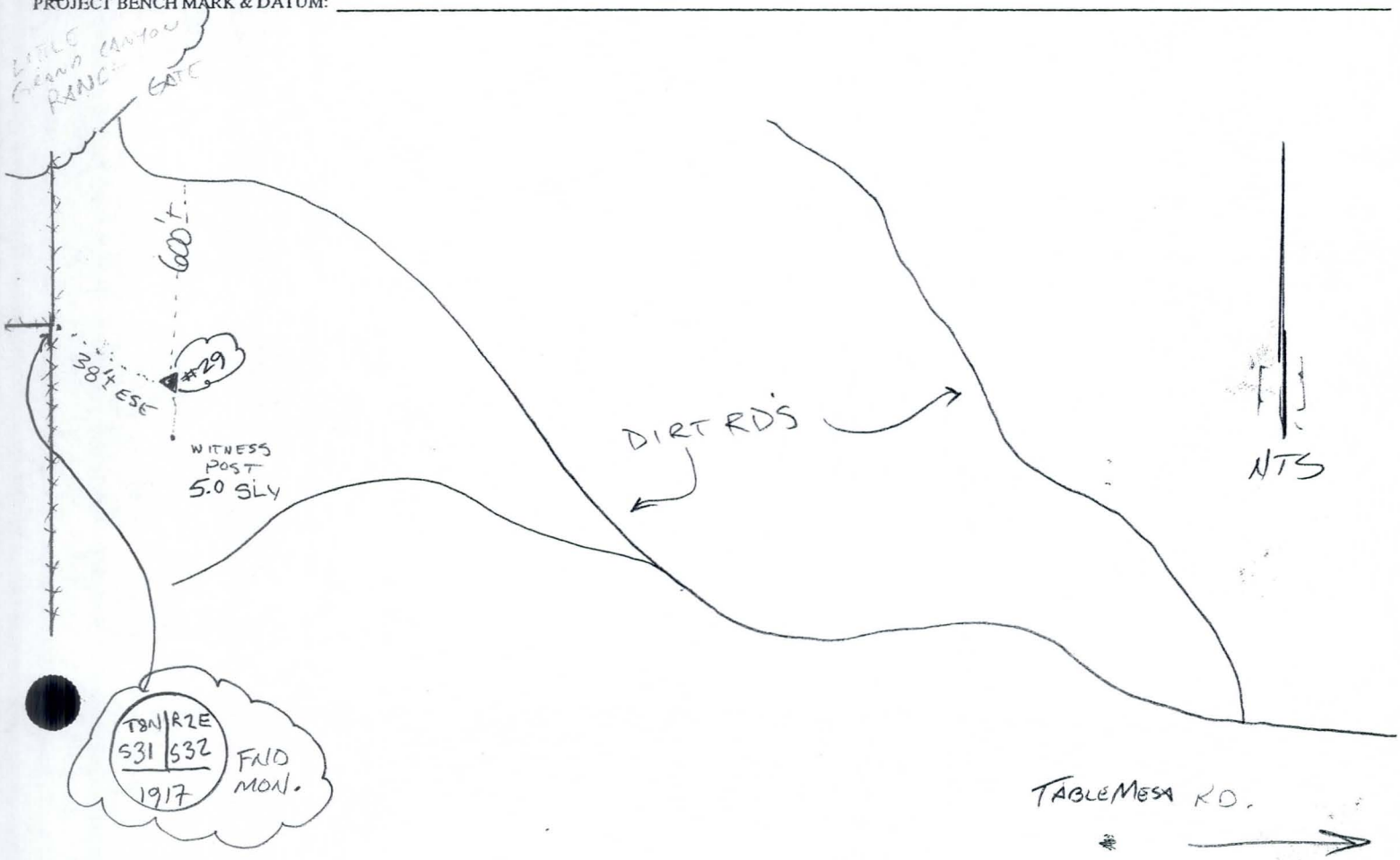
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL BENCH MARKS (U.A.F.)

F HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC ~~WAY PI #108~~ N33-59-14 W112-11-13

PROJECT BENCH MARK & DATUM: _____



BOOK_____ PAGE _____ ~~102~~ 3C

JOB No: 45-100648

CLIENT: MARICOPA CO. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WILLIS, WASHICKO

DATE: 5-14-2002

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FILE NAME: ~~1PD5134B~~

POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(S) SUBDRAIN LOCATION

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

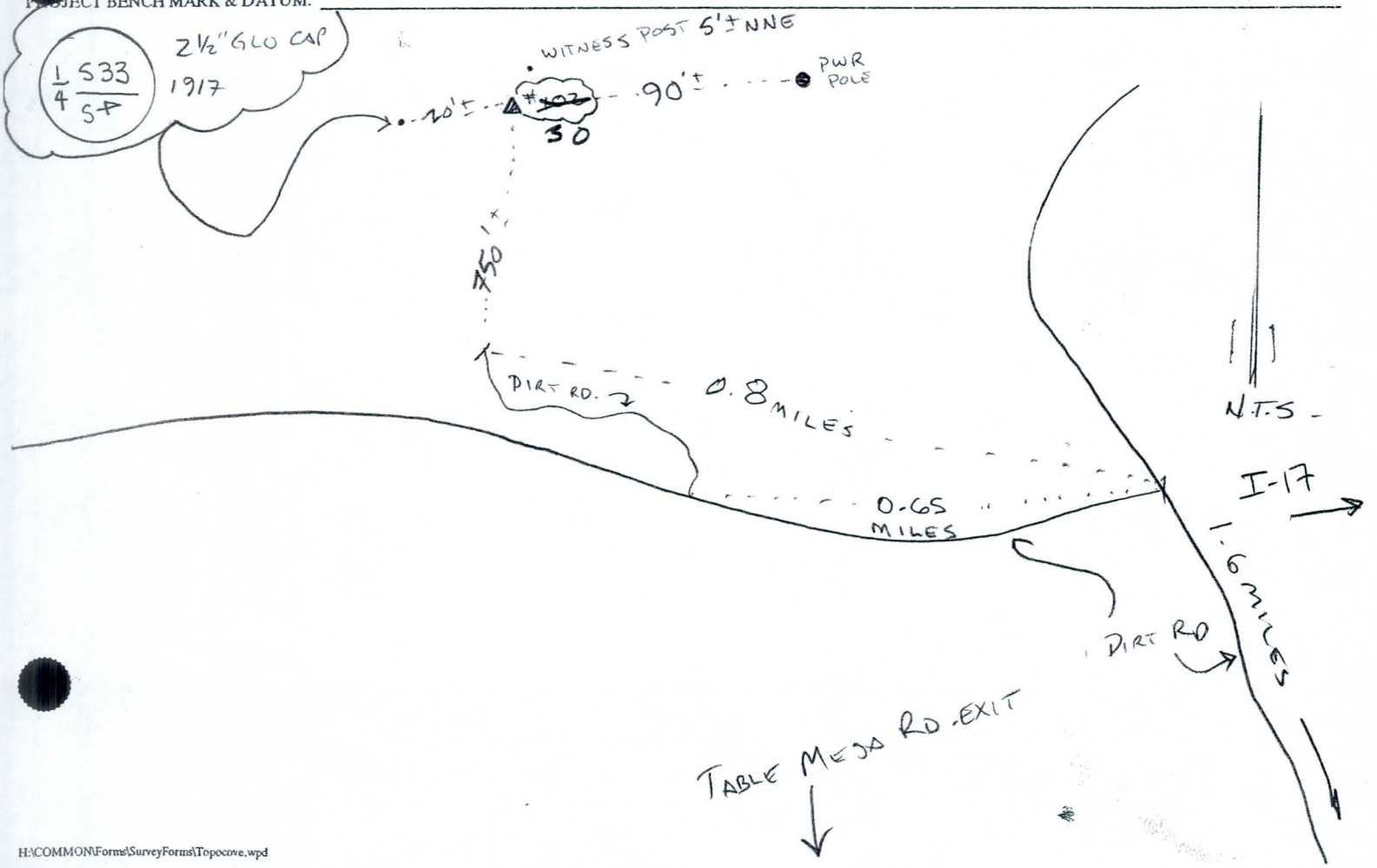
(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL BENCH MARKS (U.A.F.)

HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC ~~WAY PT. #102~~ N33-59-13 W112-09-39

PROJECT BENCH MARK & DATUM: _____



BOOK_____ PAGE ~~112~~ 3

JOB No: 45-100648

CLIENT: MARICOPA CO. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WILLIS, WASHICKO

DATE: 5-15-2002

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(602) 467-2200 Fax (602) 467-2201

FILE NAME: 1PD5135B

POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

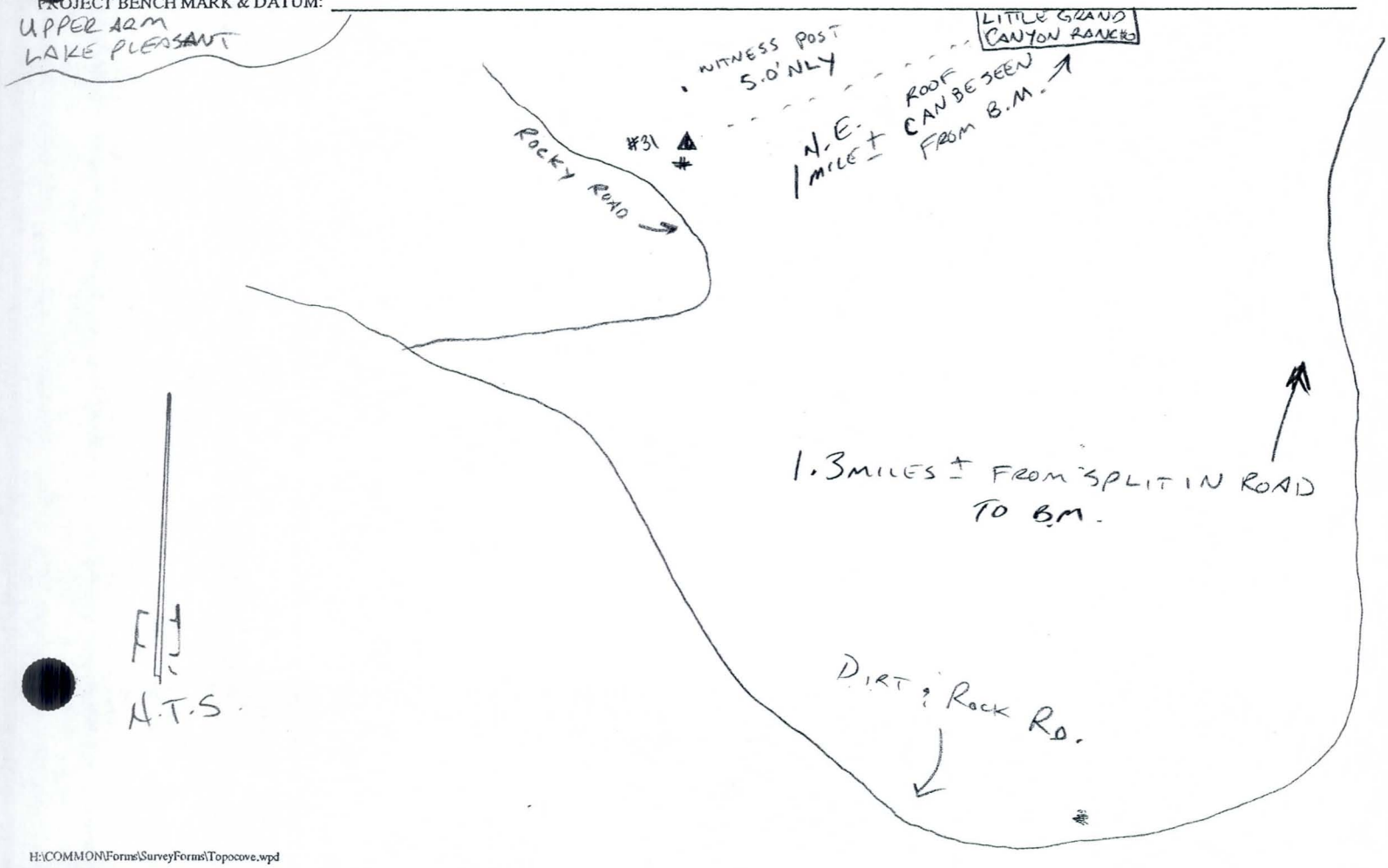
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL BENCH MARKS (U.A.F.)

F HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC ~~WAY PT # 112~~ N33-58-14 W112-11-54

PROJECT BENCH MARK & DATUM:



BOOK_____ PAGE_____

JOB No: 45-100648

CLIENT: MARICOPA CO. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WILLIS, WASAICKO

DATE: 5-15-2002

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PLANNING DESIGN CONSTRUCTION
16605 N 28th Avenue Suite 100 Phoenix Arizona 85053
(602) 467-2200 Fax (602) 467-2201

FILE NAME: ~~1PD5135B~~

POINT RANGE:

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL BENCHMARKS (U.A.F.)

☐ IMPERIAL
OF HORIZONTAL CONTROL : ☐ METRIC ~~WAS PT. #111~~ N 33-58-40 W 112-11-34

PROJECT BENCH MARK & DATUM:

~~170~~ 33

BOOK_____ PAGE_____

JOB No: 45-100648

CLIENT: MARICOPA CO. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WILLIS, WASHICKO

DATE: 5-15-2002

RBF CONSULTING

RBF CONSULTING
PLANNING DESIGN CONSTRUCTION
16605 N 28th Avenue Suite 100 Phoenix Arizona 85053
(602) 467-2200 Fax (602) 467-2201

FILE NAME: ~~1PDS135B~~

POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(S) SUBDRAIN LOCATION

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

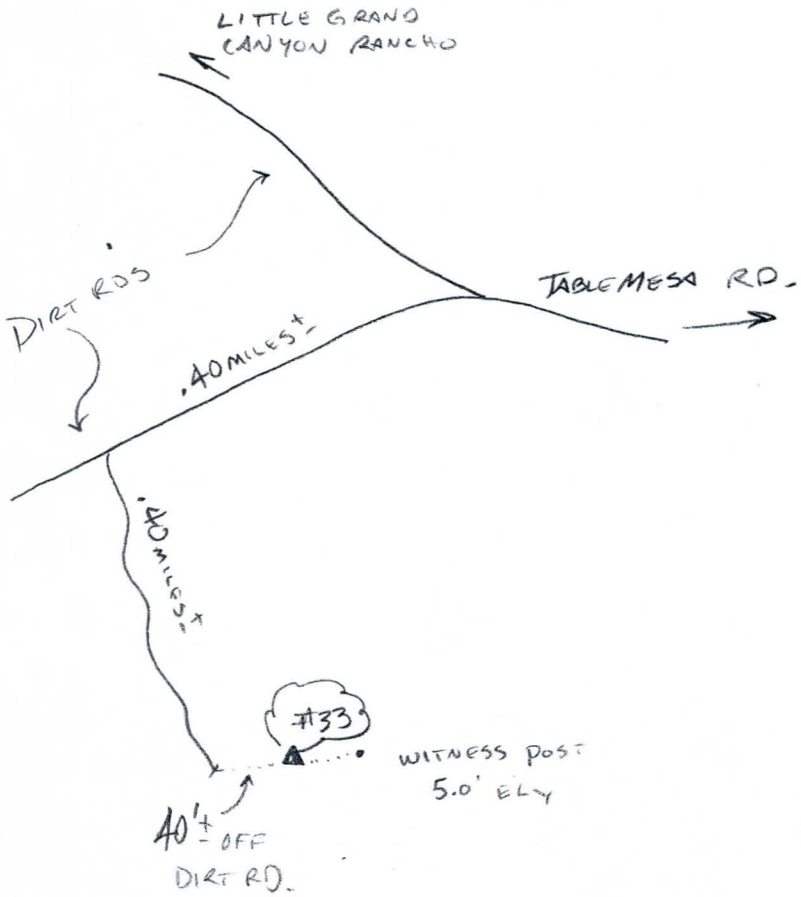
(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL BENCH MARKS (U.A.F.)

☐ IMPERIAL
F HORIZONTAL CONTROL: ☐ METRIC WAY ~~PT #110~~ N 33-58.39 W 112-11-01

PROJECT BENCH MARK & DATUM: _____



N.T.S.

BOOK_____ PAGE _____

JOB No: 45-100648

CLIENT: MARICOPA CO. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WILLIS, WASHICKO

DATE: 5-14-2002

RBF CONSULTING

RBF CONSULTING
PLANNING DESIGN CONSTRUCTION
16605 N 28th Avenue Suite 100 Phoenix Arizona 85053
(602) 467-2200 Fax (602) 467-2201

FILE NAME: ~~1PD5134B~~

POINT RANGE:

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

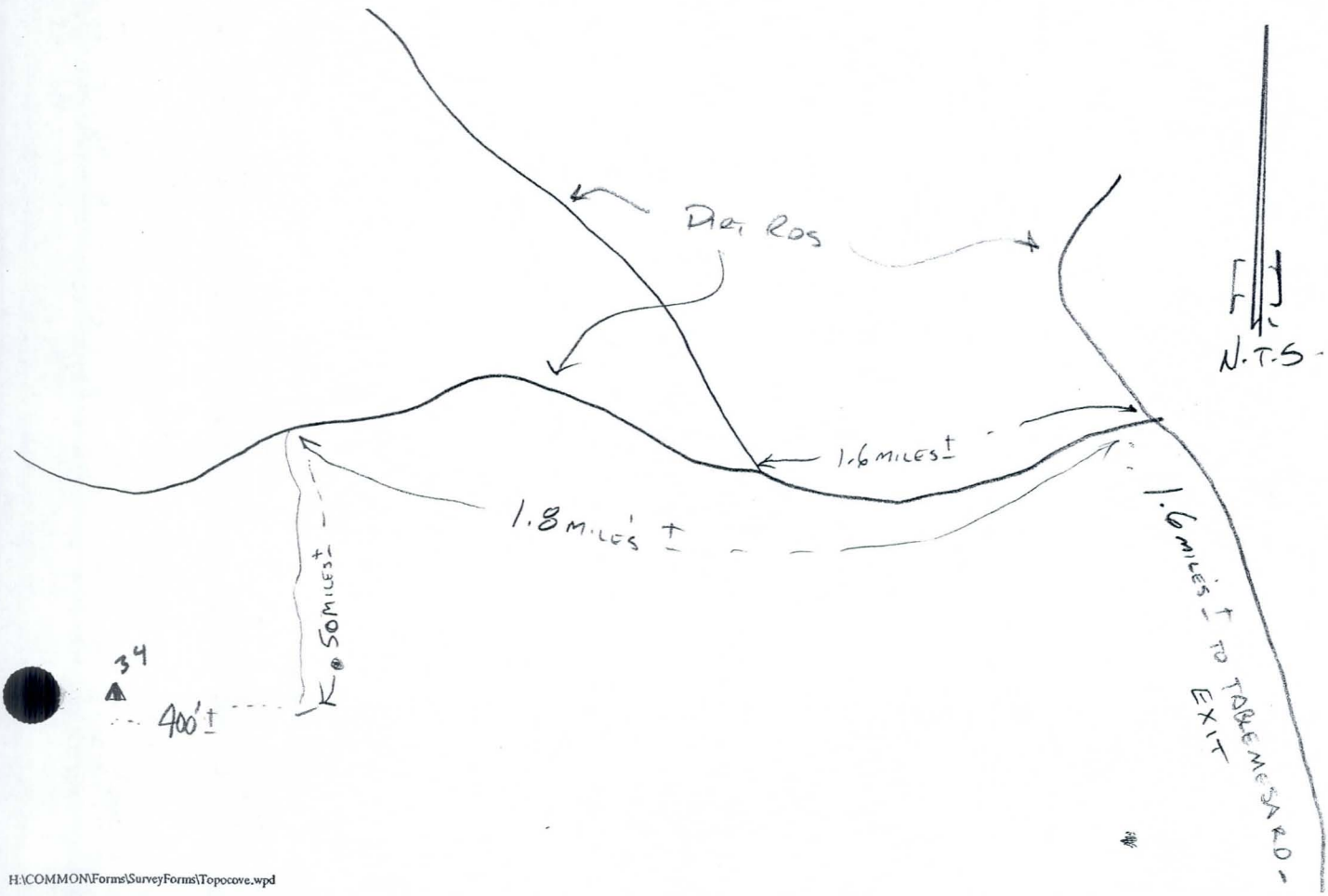
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL BENCH MARK'S (U.A.F.)

☐ IMPERIAL
F HORIZONTAL CONTROL : ☐ METRIC ~~WAYPT # 107~~ 1/33-58-48 W 112-10-40

PROJECT BENCH MARK & DATUM:



I17

BOOK_____ PAGE_____

JOB No: 45-100648

CLIENT: MARICOPA CO. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WILLIS, WASHICKO

DATE: 5-14-2002

RBF CONSULTING
PLANNING DESIGN CONSTRUCTION
16605 N 28th Avenue Suite 100 Phoenix Arizona 85053
(602) 467-2200 Fax (602) 467-2201

FILE NAME: ~~4PD5134B~~

POINT RANGE: _____

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(S) SUBDRAIN LOCATION

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

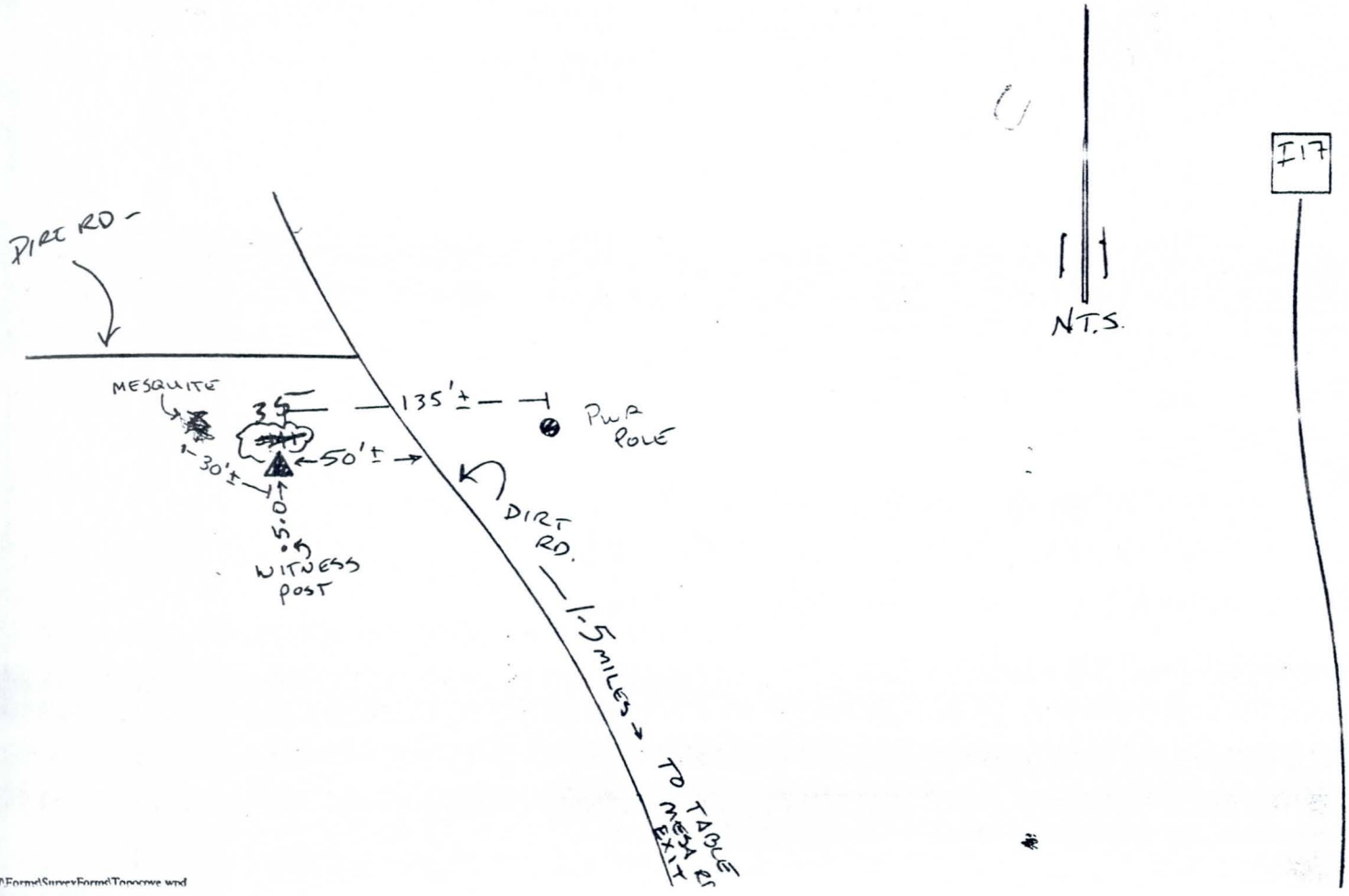
(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL BENCH MARK (U.A.F.)

OF HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC ~~WAM PT. 41~~ N 35-59-06 W 112-08-40

PROJECT BENCH MARK & DATUM: _____



BOOK_____ PAGE_____

JOB No: 45-100648

CLIENT: MARICOPA CO. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WILLIS, WASHICKO

DATE: 5-14-2002

RBF CONSULTING
PLANNING DESIGN CONSTRUCTION
16605 N 28th Avenue Suite 100 Phoenix Arizona 85053
(602) 467-2200 Fax (602) 467-2201

FILE NAME: ~~1PD5134B~~

POINT RANGE:

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

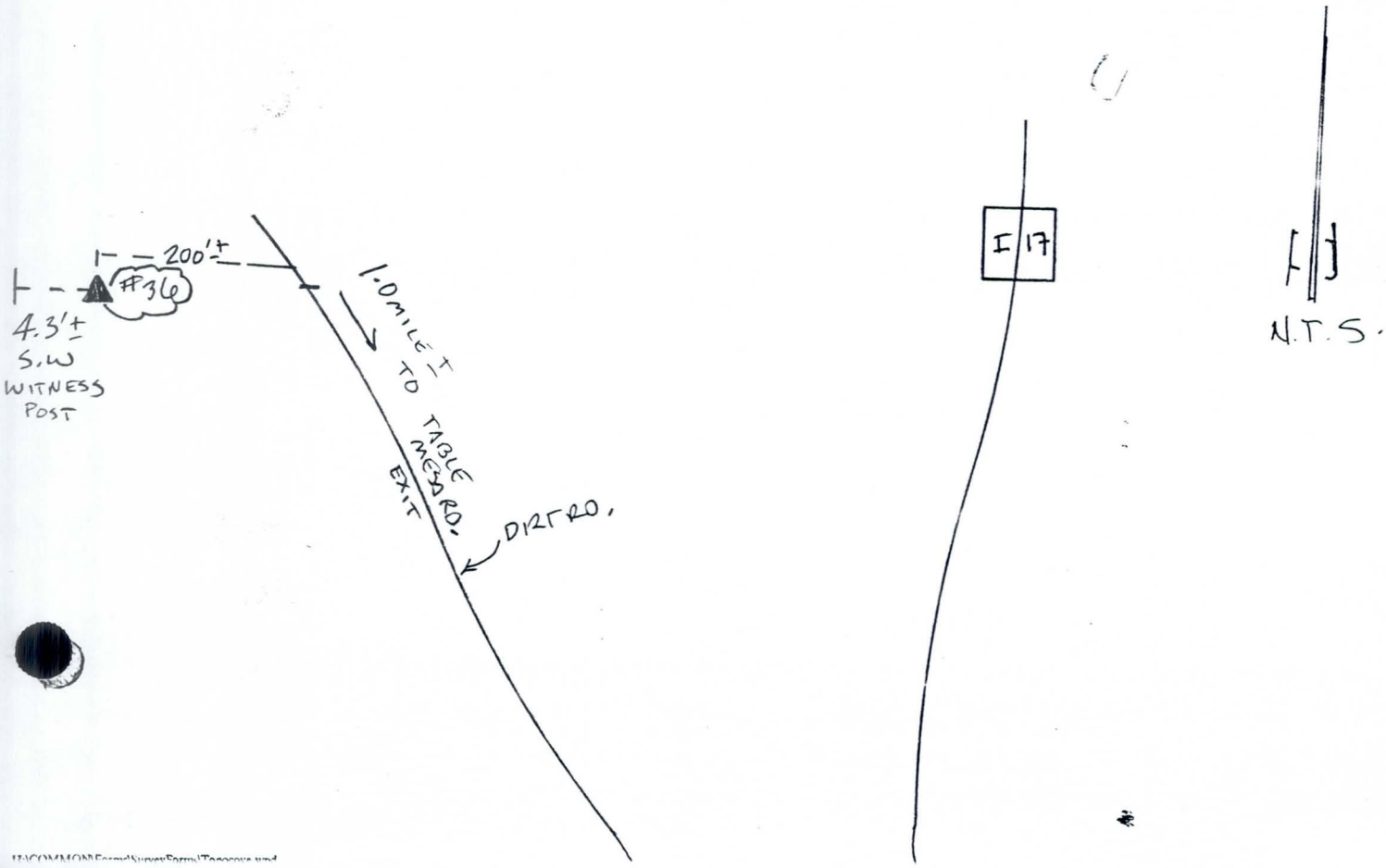
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL BENCH MARKS (U.A.F.)

HORIZONTAL CONTROL: ☐ IMPERIAL ☐ METRIC ~~WAY PT # 40~~ N-33-58-45 W 112-08-15

PROJECT BENCH MARK & DATUM:



BOOK_____ PAGE 37

JOB No: 45-100640

CLIENT: MARICOPA CO. FLOOD CONTROL DIST.

TOPOGRAPHY COVER SHEET

PARTY CHIEF: KLEIN

CREW: WILLIS, WASHICKO

DATE: 5-14-2002

RBF CONSULTING
PLANNING DESIGN CONSTRUCTION
16605 N 28th Avenue Suite 100 Phoenix Arizona 85053
(602) 467-2200 Fax (602) 467-2201

FILE NAME: ~~1PD5134B~~

POINT RANGE:

PURPOSE OF SURVEY:

(T) EARTH QUANTITY TOPO
- ☐ ALLUVIAL REMOVAL
- ☐ WET ALLUVIAL REMOVAL
- ☐ BUTTRESS/KEYWAY REMOVAL
- ☐ LAND SLIDE REMOVAL
- ☐ OVER-EXCAVATION
- ☐ STOCK PILE

(A) AS-CONSTRUCTED TOPO
- ☐ ROUGH GRADE VERIFICATION
- ☐ PRECISE GRADE VERIFICATION
- ☐ IMPROVEMENT VERIFICATION

(E) EXISTING SITE TOPO
- ☐ AERIAL PROFILE CHECK
- ☐ FOR DESIGN

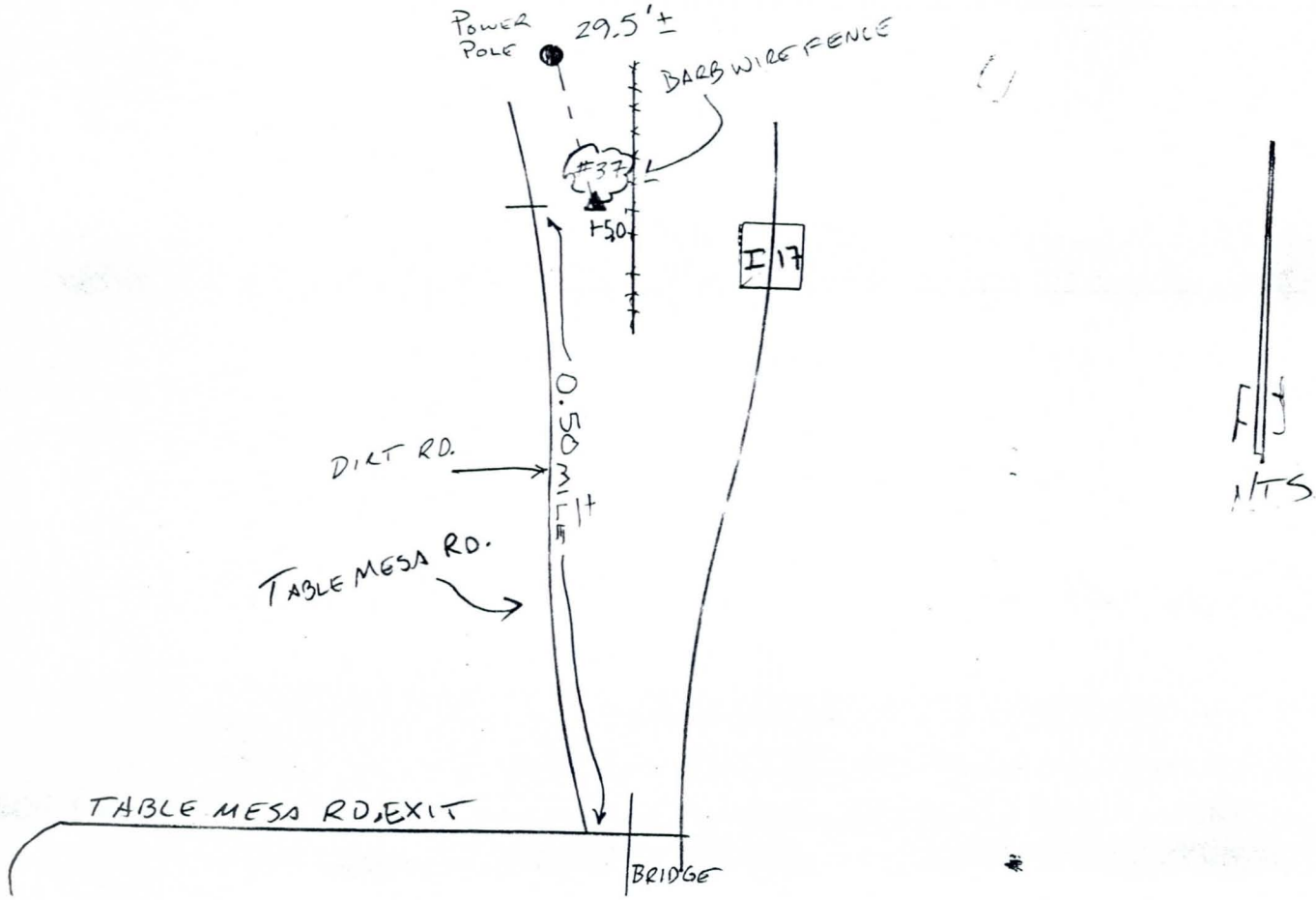
(S) SUBDRAIN LOCATION

(G) GIS

DESCRIPTION: SETTING FLOOD CONTROL BENCH MARKS (U.A.F.)

☐ IMPERIAL
F HORIZONTAL CONTROL: ☐ METRIC ~~WAY PT. #38~~ N33-58-32 W112-07-48

PROJECT BENCH MARK & DATUM:



6-4-02
DW

T NR22
CHK ROCK 0.01 (H) - 0.059 (V)

PT. #1000 3" BC IN CONC. POST AZ HWY DEP STA EL. 2251.16 1968

MOP

MOP NO1

MOP NO2

PT# 1001 3" BC IN CONC ON NORTH SIDE OF CATTLE GAURD. TABLE MESA ROAD EAST OF I-17

AZ HWY DEP 21+00 1968 2266.70

#37 UAF 37 RTK'D (UNDER POWERLINE INTERSECTION)

#36 UAF 36 RTK

#28 UAF 28 RTK

#26 UAF 26 RTK