Survey Report

CENTENNIAL WASH

Photo Control

submitted to:
Flood Control District of Maricopa County

submitted by:
Wilson & Company, Inc., Engineers & Architects

February 17, 2012

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A333.911

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February 17, 2012

Flood Control District of Maricopa County
2801 W. Durango Street
Phoenix, Arizona 85009

Centennial Wash Photo Control

Survey Report

This Survey Report is the result of a survey conducted for Flood Control District of Maricopa County to provide ground control for an aerial mapping project.

The survey was conducted during the months of December 2011 and January 2012. It began with the gathering of research data on existing NGS control points in area of the project and existing control used for adjacent mapping. These points form the basis of the survey control for this project. RTK GPS data gathered during this survey used standard GPS bases set up on NGS control points.

Field work consisting of control checks into existing NGS monuments, setting and referencing project photo control targets and monuments began December 27, 2011 and was completed January 5, 2012. Members of the field crew were Dane Branfort, and James Flemings. GPS equipment used for this survey was Trimble R8 receivers combined with Trimble TSC2 data collectors.

Surveyors Certificate

I, Gregory L Thompson, a Registered Land Surveyor in the State of Arizona, do hereby certify that the accompanying survey conducted during the months of December 2011 and January, 2012 was made under my direct supervision and the information contained hereon is true and accurate to the best of my belief.

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
42688
GREGORY L.
THOMPSON
Date Signed 2/17/2012
ARIZONA U.S.A.

Gregory L. Thompson

Expires 6/30/2014

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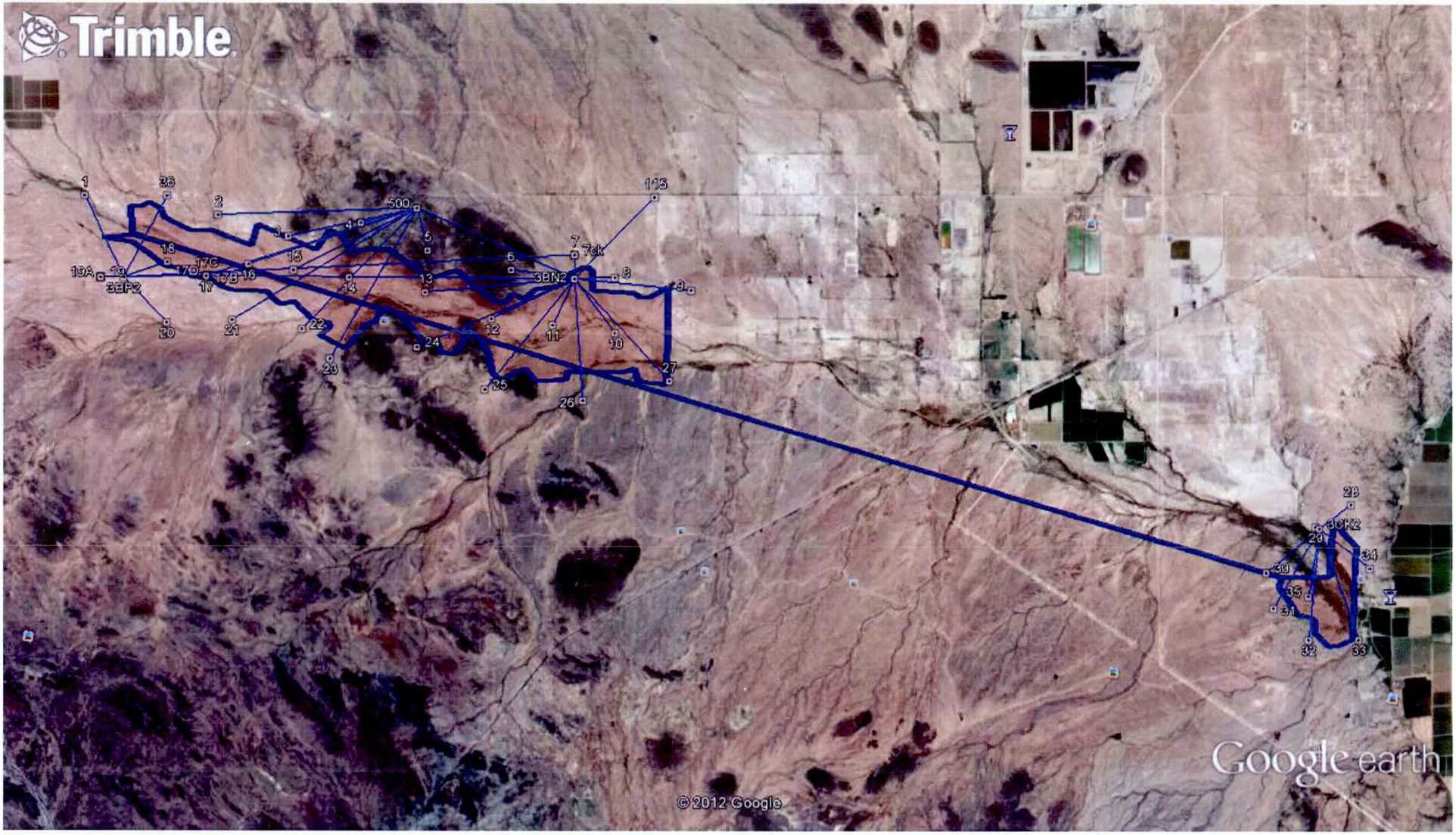

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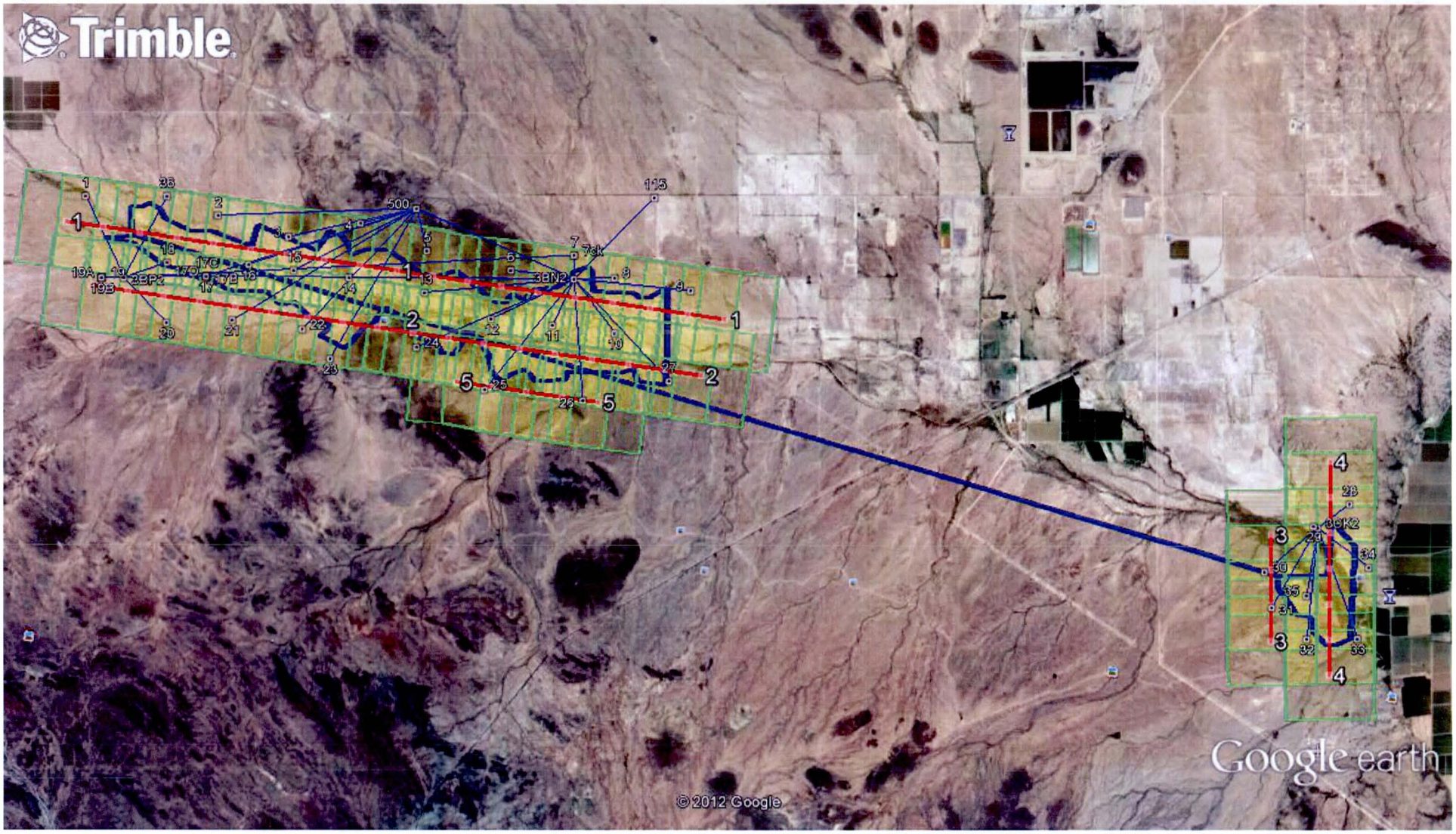
km 10

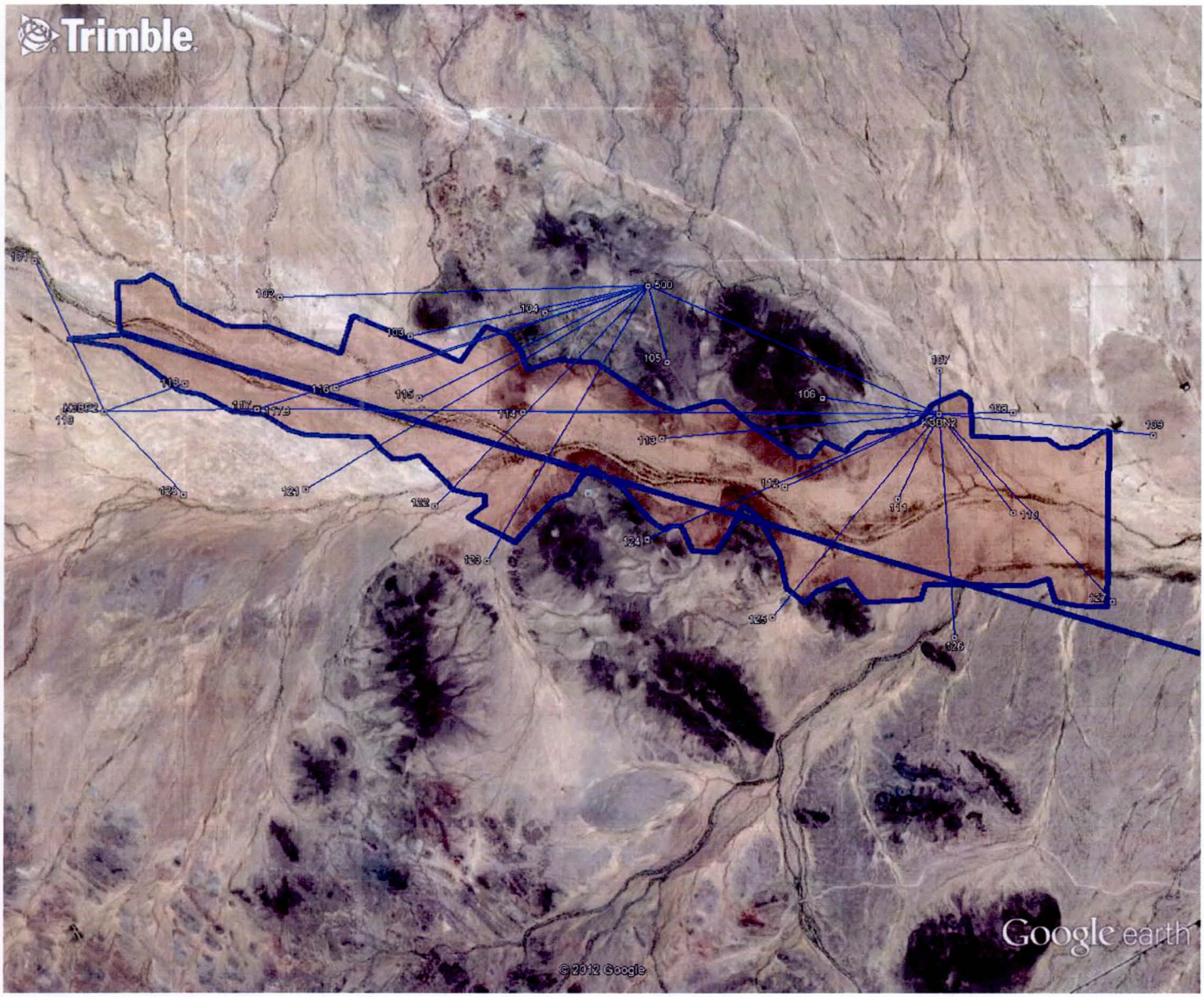


Google earth

miles 10

km 10

With flight lines & photo limits



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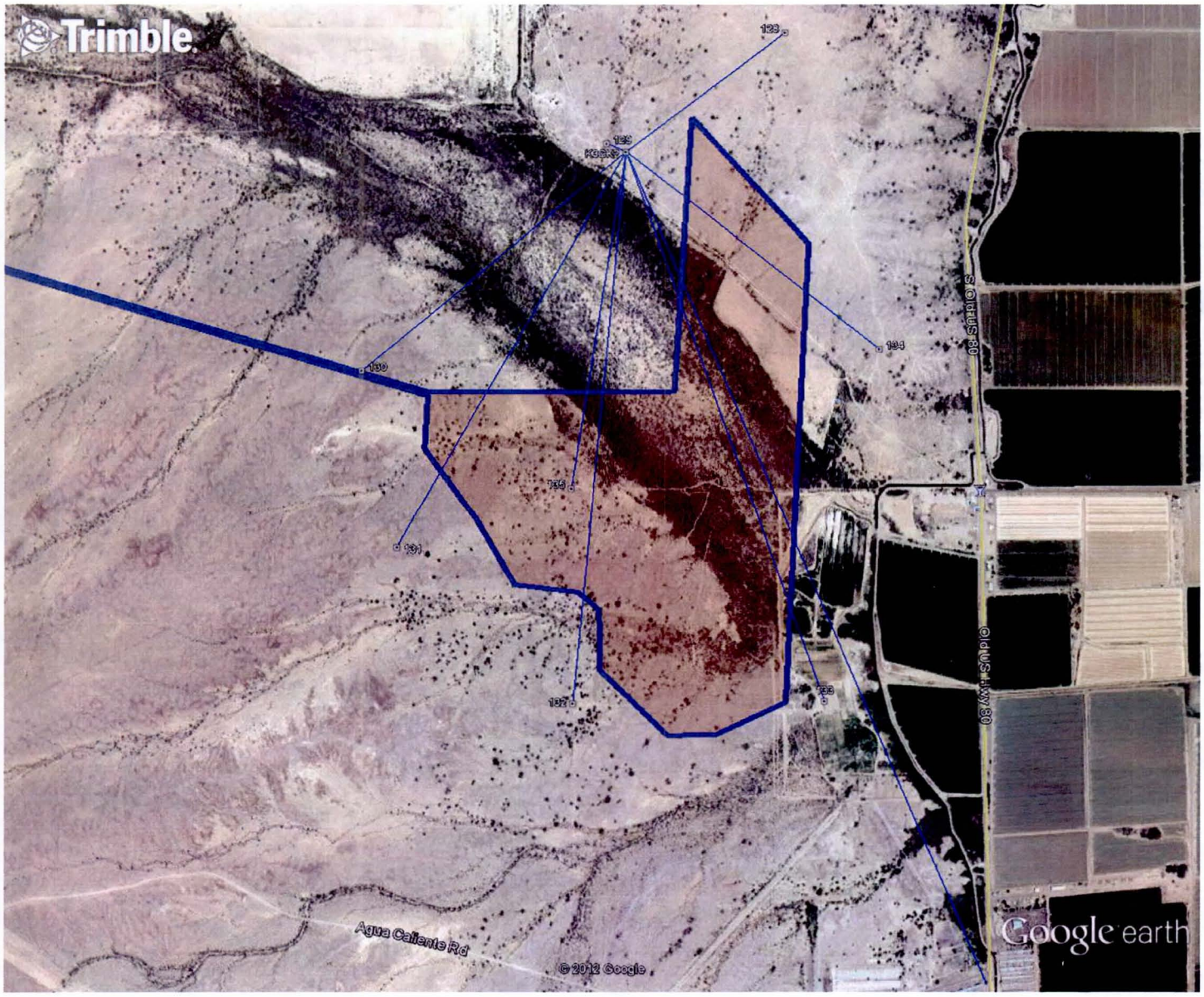

Google earth

miles 1

km 2

Centennial Wash Photo Control

Maricopa County, AZ

US State Plane NAD83 AZ Central

NAVD88, Geoid 09

Intenational Feet

Point ID	Northing	Easting	NAVD 88 Elevation	NGVD 29 Elevation	Latitude	Longitude	Ellipsoid Height	Combined Scale Factor	Feature Code
1	856155.451	346560.874	1015.984	1013.933	33°20'53.26987"	-113°04'26.64462"	913.581	0.99999942	Panel Point
2	854806.77	355086.406	998.885	996.854	33°20'40.85352"	-113°02'45.98324"	896.592	0.99999341	Ground spot check
3	853404.25	359624.991	980.603	978.575	33°20'27.46246"	-113°01'52.31264"	878.346	0.99999073	Panel Point
4	854198.262	364327.115	974.694	972.67	33°20'35.81120"	-113°00'56.99201"	872.485	0.99998737	Ground spot check
5	852429.819	368573.479	990.122	988.098	33°20'18.75692"	-113°00'06.72572"	887.921	0.99998338	Panel Point
6	851127.999	373969.749	1027.226	1025.208	33°20'06.42970"	-112°59'02.96917"	925.032	0.99997755	Ground spot check
7	852066.738	378079.082	934.706	932.692	33°20'16.13000"	-112°58'14.65087"	832.529	0.99997892	Panel Point
8	850578.956	380648.853	918.912	916.898	33°20'01.66782"	-112°57'44.18817"	816.729	0.99997779	Ground spot check
9	849738.023	385558.527	906.918	904.907	33°19'53.83204"	-112°56'46.22823"	804.738	0.9999748	Panel Point
10	847034.806	380620.674	908.7	906.679	33°19'26.60369"	-112°57'44.10141"	806.495	0.9999783	Ground spot check
11	847580.805	376609.911	917.056	915.032	33°19'31.60476"	-112°58'31.42931"	814.843	0.99998085	Panel Point
12	848035.705	372647.317	926.787	924.759	33°19'35.70449"	-112°59'18.17991"	824.564	0.99998334	Ground spot check
13	849774.886	368377.992	941.031	939.003	33°19'52.47261"	-113°00'08.70379"	838.805	0.99998588	Panel Point
14	850752.657	363524.08	958.951	956.92	33°20'01.64154"	-113°01'06.02765"	856.701	0.99998874	Ground spot check
15	851268.203	359917.137	971.673	969.642	33°20'06.36251"	-113°01'48.60048"	869.4	0.99999093	Panel Point
16	851658.15	357009.28	978.371	976.337	33°20'09.91147"	-113°02'22.91957"	876.074	0.99999288	Ground spot check
17	850931.461	354265.407	996.178	994.141	33°20'02.42917"	-113°02'55.16384"	893.845	0.99999419	Panel Point
18	851837.597	351756.882	1005.624	1003.583	33°20'11.12261"	-113°03'24.84348"	903.269	0.99999574	Ground spot check
19	850916.904	347536.357	1022.899	1020.845	33°20'01.55533"	-113°04'14.46320"	920.488	0.9999983	Panel Point
20	847963.295	351682.632	1001.218	999.171	33°19'32.78835"	-113°03'25.21913"	898.841	0.99999601	Panel Point
21	848110.119	355928.612	985.781	983.744	33°19'34.69736"	-113°02'35.20377"	883.447	0.99999338	Ground spot check
22	847472.67	360421.767	969.745	967.708	33°19'28.86841"	-113°01'42.17637"	867.446	0.99999063	Panel Point
23	845566.482	362246.945	968.498	966.461	33°19'10.20333"	-113°01'20.43066"	866.2	0.99998927	Ground spot check
24	846241.082	367829.373	1061.747	1059.713	33°19'17.45751"	-113°00'14.73484"	959.491	0.99998053	Panel Point

Point ID	Northing	Easting	NAVD 88 Elevation	NGVD 29 Elevation	Latitude	Longitude	Ellipsoid Height	Combined Scale Factor	Feature Code
25	843496.712	372178.192	939.314	937.28	33°18'50.75404"	-112°59'23.15781"	837.063	0.9999831	Ground spot check
26	842732.654	378518.086	934.282	932.251	33°18'43.83442"	-112°58'08.36670"	832.052	0.99997862	Panel Point
27	843930.912	384078.541	908.341	906.32	33°18'56.23866"	-112°57'02.99123"	806.133	0.9999758	Panel Point
28	835580.149	428159.64	818.923	816.859	33°17'37.64484"	-112°48'22.73534"	716.925	0.99995041	Panel Point
29	834162.929	425832.825	800.334	798.274	33°17'23.42689"	-112°48'50.00269"	698.315	0.99995276	Ground spot check
30	831247.883	422627.58	813.924	811.867	33°16'54.31357"	-112°49'27.46149"	711.88	0.99995413	Panel Point
31	828959.246	423063.916	823.507	821.447	33°16'31.70905"	-112°49'22.08803"	721.461	0.9999534	Ground spot check
32	826897.902	425323.365	801.551	799.487	33°16'11.50885"	-112°48'55.26742"	699.512	0.99995302	PTT
33	826891.036	428598.194	784.894	782.83	33°16'11.71805"	-112°48'16.69836"	682.869	0.99995177	PTT
34	831467.383	429355.396	806.21	804.146	33°16'57.05677"	-112°48'08.23774"	704.203	0.99995028	Ground spot check
35	829692.906	425328.904	808.031	805.971	33°16'39.16100"	-112°48'55.48550"	705.996	0.99995271	Ground spot check
115	855707.466	383283.466	937.999	935.998	33°20'52.66317"	-112°57'13.73985"	835.863	0.99997496	CKGround spot check
500	855096.443	367931.595	1011.909	1009.891	33°20'45.07054"	-113°00'14.61869"	909.733	0.99998283	MON
3BN2	850545.513	378051.387	926.274	924.26	33°20'01.07821"	-112°58'14.79599"	824.085	0.99997935	CP
3BP2	850891.56	348949.051	1013.369	1011.322	33°20'01.45900"	-113°03'57.81150"	910.974	0.99999762	CP
3CK2	834051.5	426081.8	806.482	804.422	33°17'22.34566"	-112°48'47.05852"	704.518	0.99995231	CP

TYP_LID	HOR_LID	VER_LID	XNAD27	YNAD27	XNAD83	YNAD83	NGVD29	NAVD88	MNT_LID	PNTNUM	DESC
6	7	8	0.000	0.000	378051.387	850545.513	0.000	926.274	27	3BN2	National geodetic survey benchmark (NGS)
6	7	8	0.000	0.000	348949.051	850891.56	0.000	1013.369	27	3BP2	National geodetic survey benchmark (NGS)
6	7	8	0.000	0.000	426081.800	834051.500	0.000	806.482	27	3CK2	National geodetic survey benchmark (NGS)
6	7	8	0.000	0.000	346560.874	856155.451	0.000	1015.984	10	1	Set 5/8" Rebar with aluminum cap
6	7	8	0.000	0.000	359624.991	853404.25	0.000	980.603	10	3	Set 5/8" Rebar with aluminum cap
6	7	8	0.000	0.000	368573.479	852429.819	0.000	990.122	3	5	Rebar
6	7	8	0.000	0.000	378079.082	852066.738	0.000	934.706	10	7	Set 5/8" Rebar with aluminum cap
6	7	8	0.000	0.000	385558.527	849738.023	0.000	906.918	3	9	Rebar
6	7	8	0.000	0.000	376609.911	847580.805	0.000	917.056	10	11	Set 5/8" Rebar with aluminum cap
6	7	8	0.000	0.000	368377.992	849774.886	0.000	941.031	10	13	Set 5/8" Rebar with aluminum cap
6	7	8	0.000	0.000	359917.137	851268.203	0.000	971.673	3	15	Rebar
6	7	8	0.000	0.000	354265.407	850931.461	0.000	996.178	10	17	Set 5/8" Rebar with aluminum cap
6	7	8	0.000	0.000	347536.357	850916.904	0.000	1022.899	10	19	Set 5/8" Rebar with aluminum cap
6	7	8	0.000	0.000	351682.632	847963.295	0.000	1001.218	10	20	Set 5/8" Rebar with aluminum cap
6	7	8	0.000	0.000	360421.767	847472.67	0.000	969.745	3	22	Rebar
6	7	8	0.000	0.000	367829.373	846241.082	0.000	1061.747	3	24	Rebar
6	7	8	0.000	0.000	378518.086	842732.654	0.000	934.282	3	26	Rebar
6	7	8	0.000	0.000	384078.541	843930.912	0.000	908.341	10	27	Set 5/8" Rebar with aluminum cap
6	7	8	0.000	0.000	428159.64	835580.149	0.000	818.923	3	28	Rebar
6	7	8	0.000	0.000	422627.58	831247.883	0.000	813.924	3	30	Rebar
6	7	8	0.000	0.000	425323.365	826897.902	0.000	801.551	3	32	Rebar
6	7	8	0.000	0.000	428598.194	826891.036	0.000	784.894	3	33	Rebar

Project Information		Coordinate System	
Name:	C:\Documents and Settings\glthompson\My Documents\Trimble Business Center\FCDMC-Centennial.vce	Name:	Default
Size:	440 KB	Datum:	WGS 1984
Modified:	1/10/2012 1:59:36 PM (UTC:-6)	Zone:	Default
Time zone:	Central Standard Time	Geoid:	GEOID09 (Conus)
Reference number:		Vertical datum:	
Description:			

Additional Coordinate System Details

Local Site Settings			
Project latitude:	?	Ground scale factor:	1
Project longitude:	?	False northing offset:	0.000 ft
Project height:	2500.000 ft	False easting offset:	0.000 ft

Project Computation Report

Coordinate System Definition	
Projection:	**Transverse Mercator**
Origin latitude:	N31°00'00.00000"
Origin longitude:	W111°55'00.00000"
False northing:	0.000 ft
False easting:	700000.000 ft
Scale factor:	0.9999000000
Parallel 1:	?
Parallel 2:	?
Shift grid name:	None
Azimuth:	
System:	North
Coordinate direction:	North-East
Datum Transformation:	
Method:	None
Translation X:	?
Translation Y:	?

Translation Z:	?
Rotation X:	?
Rotation Y:	?
Rotation Z:	?
Scale factor:	?
Ellipsoid:	World Geodetic System 1984
Semi major axis:	20925646.325 ft
Flattening:	1 / 298.2572229329
Datum grid name:	None
Latitude grid file name:	None
Longitude grid file name:	None
Height grid file name:	None
Local site settings:	
Project latitude:	?
Project longitude:	?
Project height:	2500.000 ft
Ground scale factor:	1.0000000000
False northing offset:	0.000 ft
False easting offset:	0.000 ft
Geoid Model:	
Name:	GEOID09 (Conus)
File:	g09us.ggf
Horizontal Site Calibration:	
Translation north:	0.000 ft
Translation east:	0.000 ft
Rotation:	0°00'00"
Origin north:	0.000 ft
Origin east:	0.000 ft
Scale factor:	1.0000000000

Vertical Site Calibration:	
Shift at origin:	0.000 ft
Slope North:	0.000 ppm
Slope East:	0.000 ppm
Origin north:	0.000 ft
Origin east:	0.000 ft

GNSS Vector Transformation Parameters:	
Latitude deflection:	N0°00'00.00000"
Longitude deflection:	E0°00'00.00000"
Azimuth rotation:	0°00'00"
Scale factor:	1.0000000000

Date: 2/17/2012 3:16:52 PM	Project: C:\Documents and Settings\glthompson\My Documents\Trimble Business Center\FCDMC-Centennial.vce	Trimble Business Center

The NGS Data Sheet

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

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1        National Geodetic Survey,   Retrieval Date = DECEMBER 27, 2011
 AJ3811 ***********************************************************************
 AJ3811  HT_MOD      -  This is a Height Modernization Survey Station.
 AJ3811  DESIGNATION -  3CK2
 AJ3811  PID         -  AJ3811
 AJ3811  STATE/COUNTY-  AZ/MARICOPA
 AJ3811  USGS QUAD   -  ARLINGTON (1984)
 AJ3811
 AJ3811                        *CURRENT SURVEY CONTROL
 AJ3811  ___________________________________________________________________
 AJ3811* NAD 83(2007)-  33 17 22.34650(N)    112 48 47.05901(W)     ADJUSTED
 AJ3811* NAVD 88     -       245.83   (meters)     806.5    (feet)  GPS OBS
 AJ3811  ___________________________________________________________________
 AJ3811  EPOCH DATE  -        2007.00
 AJ3811  X           -  -2,069,330.654 (meters)                     COMP
 AJ3811  Y           -  -4,919,600.899 (meters)                     COMP
 AJ3811  Z           -   3,480,963.671 (meters)                     COMP
 AJ3811  LAPLACE CORR-           0.86  (seconds)                    DEFLEC09
 AJ3811  ELLIP HEIGHT-         214.737 (meters)          (02/10/07) ADJUSTED
 AJ3811  GEOID HEIGHT-         -31.09  (meters)                     GEOID09
 AJ3811
 AJ3811  ------- Accuracy Estimates (at 95% Confidence Level in cm) --------
 AJ3811  Type    PID    Designation                       North   East  Ellip
 AJ3811  ___________________________________________________________________
 AJ3811  NETWORK AJ3811 3CK2                               0.69   0.63   1.04
 AJ3811  ___________________________________________________________________
 AJ3811
 AJ3811.The horizontal coordinates were established by GPS observations
 AJ3811.and adjusted by the National Geodetic Survey in February 2007.
 AJ3811
 AJ3811.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
 AJ3811.See National Readjustment for more information.
 AJ3811.The horizontal coordinates are valid at the epoch date displayed above.
 AJ3811.The epoch date for horizontal control is a decimal equivalence
 AJ3811.of Year/Month/Day.
 AJ3811
 AJ3811.The orthometric height was determined by GPS observations and a
 AJ3811.high-resolution geoid model using precise GPS observation and
 AJ3811.processing techniques.
 AJ3811
 AJ3811.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 AJ3811
 AJ3811.The Laplace correction was computed from DEFLEC09 derived deflections.
 AJ3811
 AJ3811.The ellipsoidal height was determined by GPS observations
 AJ3811.and is referenced to NAD 83.
 AJ3811
 AJ3811.The geoid height was determined by GEOID09.
 AJ3811
 AJ3811;                    North         East     Units Scale Factor Converg.
 AJ3811;SPC AZ C     -   254,218.923   129,869.720   MT  0.99998591   -0 29 31.3
```

```
AJ3811;SPC AZ C     -   834,051.58    426,081.76   iFT  0.99998591   -0 29 31.3
AJ3811;UTM  12      - 3,684,852.618   331,174.451   MT  0.99995142   -0 59 43.4
AJ3811
AJ3811!             -  Elev Factor  x  Scale Factor =   Combined Factor
AJ3811!SPC AZ C     -   0.99996629  x   0.99998591  =   0.99995220
AJ3811!UTM  12      -   0.99996629  x   0.99995142  =   0.99991771
AJ3811
AJ3811                          SUPERSEDED SURVEY CONTROL
AJ3811
AJ3811  NAD 83(1992)-  33 17 22.34567(N)    112 48 47.05877(W) AD(       ) B
AJ3811  ELLIP H (04/12/01)  214.767  (m)                       GP(       ) 3 2
AJ3811
AJ3811.Superseded values are not recommended for survey control.
AJ3811.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AJ3811.See file dsdata.txt to determine how the superseded data were derived.
AJ3811
AJ3811_U.S. NATIONAL GRID SPATIAL ADDRESS: 12SUB3117484852(NAD 83)
AJ3811_MARKER: F = FLANGE-ENCASED ROD
AJ3811_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AJ3811_STAMPING: 3CK2 10-1999
AJ3811_MARK LOGO: MCDOT
AJ3811_PROJECTION: FLUSH
AJ3811_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3811_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
AJ3811_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3811+SATELLITE: SATELLITE OBSERVATIONS - January 16, 2006
AJ3811_ROD/PIPE-DEPTH: 13.4 meters
AJ3811_SLEEVE-DEPTH  :  0.8 meters
AJ3811
AJ3811  HISTORY     - Date     Condition        Report By
AJ3811  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3811  HISTORY     - 20060116 GOOD             NGS
AJ3811
AJ3811                          STATION DESCRIPTION
AJ3811
AJ3811'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3811'THE STATION IS LOCATED ABOUT 3.6 MI (5.8 KM) SOUTHWEST OF THE TOWN OF
AJ3811'ARLINGTON IN TOWNSHIP 2 SOUTH, RANGE 5 WEST, SECTION 6
AJ3811'OWNERSHIP - STATE LAND DEPARTMENT
AJ3811'TO REACH THE STATION FROM THE JUNCTION OF HIGHWAY 85 AND OLD HIGHWAY
AJ3811'80, DRIVE SOUTHWESTERLY ON OLD HIGHWAY 80 FOR 12.7 MI (20.4 KM) TO AN
AJ3811'UNMARKED DIRT ROAD WITH A GATE ON YOUR RIGHT (WEST) , THENCE TURN
AJ3811'RIGHT (WEST) ONTO THE DIRT ROAD THROUGH THE GATE AND DRIVE
AJ3811'NORTHWESTERLY 1.2 MI (1.9 KM) TO A Y IN THE ROAD BEFORE REACHING A
AJ3811'BARBED WIRE FENCE ON YOUR RIGHT, THENCE VEER RIGHT AT THE Y AND DRIVE
AJ3811'NORTHEASTERLY ABOUT 250 FT (76.2 M) TO THE STATION
AJ3811'MONUMENT DESCRIPTION - THE STATION IS MARKED BY AN ALUMINUM CAP
AJ3811'COMPRESSED ON A 44 FT (13.4 M) STAINLESS STEEL ROD DRIVEN TO REFUSAL,
AJ3811'ENCASED IN A 1 INCH GREASE FILLED PVC PIPE ENCLOSED IN A 5 INCH PVC
AJ3811'PIPE WITH A COUNTY LOGO ACCESS COVER STAMPED 3CK2 1999, SURROUNDED BY
AJ3811'A CONCRETE COLLAR, FLUSH WITH THE GROUND, WITNESSED BY A WHITE
AJ3811'CARSONITE MARKER
AJ3811'STATION TIES -
AJ3811'245 FT (74.7 M) NORTHEAST OF THE CENTERLINE OF THE DIRT ROAD BEFORE
AJ3811'THE Y
AJ3811'220 FT (67.1 M) SOUTHEAST OF THE BARBED WIRE FENCE
AJ3811'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3811'VISIT-WWW.MCDOT.MARICOPA.GOV       SEARCH KEYWORD  GDACS
AJ3811
AJ3811                          STATION RECOVERY (2006)
```

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AJ3811
AJ3811'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2006 (DHM)
AJ3811'TO REACH THE STATION FROM THE JUNCTION OF HIGHWAY 85 AND OLD HIGHWAY
AJ3811'80, GO SOUTHWESTERLY ON OLD HIGHWAY 80 FOR 12.7 MI (20.4 KM) TO AN
AJ3811'UNMARKED DIRT ROAD WITH GATE ON RIGHT, ABOUT 0.1 MI (0.2 KM) NORTH OF
AJ3811'THE DESERT ROSE BAR, CAFE AND ARENA.  TURN RIGHT, WEST ON THE DIRT
AJ3811'ROAD, THROUGH THE GATE AND GO NORTHWESTERLY FOR 1.2 MI (1.9 KM) TO A
AJ3811'FORK IN ROAD AT STOCK PEN ON LEFT AND BARBED WIRE FENCE ON RIGHT.
AJ3811'BEAR RIGHT AT FORK AND GO NORTHEASTERLY FOR ABOUT 250 FT (76.2 M) TO
AJ3811'THE STATION.

*** retrieval complete.
Elapsed Time = 00:00:01
```

The NGS Data Sheet

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

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DATABASE = NGSIDB , PROGRAM = datasheet95, VERSION = 7.87.4.2
1        National Geodetic Survey,   Retrieval Date = DECEMBER 28, 2011
 AJ3954 ***********************************************************************
 AJ3954  HT_MOD      -  This is a Height Modernization Survey Station.
 AJ3954  DESIGNATION -  3BN2
 AJ3954  PID         -  AJ3954
 AJ3954  STATE/COUNTY-  AZ/MARICOPA
 AJ3954  USGS QUAD   -  GILLESPIE (1984)
 AJ3954
 AJ3954                        *CURRENT SURVEY CONTROL
 AJ3954  ___________________________________________________________________
 AJ3954* NAD 83(2007)-  33 20 01.07821(N)    112 58 14.79599(W)     ADJUSTED
 AJ3954* NAVD 88     -       282.31   (meters)     926.2    (feet)  GPS OBS
 AJ3954  ___________________________________________________________________
 AJ3954  EPOCH DATE  -        2007.00
 AJ3954  X           -  -2,081,827.560 (meters)                     COMP
 AJ3954  Y           -  -4,911,441.731 (meters)                     COMP
 AJ3954  Z           -   3,485,070.608 (meters)                     COMP
 AJ3954  LAPLACE CORR-           0.29  (seconds)                    DEFLEC09
 AJ3954  ELLIP HEIGHT-         251.181 (meters)          (02/10/07) ADJUSTED
 AJ3954  GEOID HEIGHT-         -31.15  (meters)                     GEOID09
 AJ3954
 AJ3954  ------- Accuracy Estimates (at 95% Confidence Level in cm) --------
 AJ3954  Type    PID    Designation                     North   East  Ellip
 AJ3954  -------------------------------------------------------------------
 AJ3954  NETWORK AJ3954 3BN2                             0.69   0.61   1.16
 AJ3954  -------------------------------------------------------------------
 AJ3954
 AJ3954.The horizontal coordinates were established by GPS observations
 AJ3954.and adjusted by the National Geodetic Survey in February 2007.
 AJ3954
 AJ3954.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
 AJ3954.See National Readjustment for more information.
 AJ3954.The horizontal coordinates are valid at the epoch date displayed above.
 AJ3954.The epoch date for horizontal control is a decimal equivalence
 AJ3954.of Year/Month/Day.
 AJ3954
 AJ3954.The orthometric height was determined by GPS observations and a
 AJ3954.high-resolution geoid model using precise GPS observation and
 AJ3954.processing techniques.
 AJ3954
 AJ3954.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 AJ3954
 AJ3954.The Laplace correction was computed from DEFLEC09 derived deflections.
 AJ3954
 AJ3954.The ellipsoidal height was determined by GPS observations
 AJ3954.and is referenced to NAD 83.
 AJ3954
 AJ3954.The geoid height was determined by GEOID09.
 AJ3954
 AJ3954;                    North         East     Units Scale Factor Converg.
```

```
AJ3954;SPC AZ C     -   259,246.272   115,230.063   MT  1.00001869   -0 34 45.5
AJ3954;SPC AZ C     -   850,545.51    378,051.39   iFT  1.00001869   -0 34 45.5
AJ3954;UTM  12      - 3,690,008.362   316,579.832   MT  1.00001480   -1 04 59.8
AJ3954
AJ3954!             -  Elev Factor  x  Scale Factor =   Combined Factor
AJ3954!SPC AZ C     -   0.99996057  x   1.00001869  =   0.99997926
AJ3954!UTM  12      -   0.99996057  x   1.00001480  =   0.99997537
AJ3954
AJ3954                          SUPERSEDED SURVEY CONTROL
AJ3954
AJ3954  NAD 83(1992)-  33 20 01.07733(N)    112 58 14.79578(W) AD(       ) B
AJ3954  ELLIP H (04/12/01)  251.208  (m)                       GP(       ) 3 2
AJ3954
AJ3954.Superseded values are not recommended for survey control.
AJ3954.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AJ3954.See file dsdata.txt to determine how the superseded data were derived.
AJ3954
AJ3954_U.S. NATIONAL GRID SPATIAL ADDRESS: 12SUB1657990008(NAD 83)
AJ3954_MARKER: I = METAL ROD
AJ3954_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AJ3954_STAMPING: 3BN2 1999
AJ3954_MARK LOGO: MCDOT
AJ3954_PROJECTION: FLUSH
AJ3954_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3954_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3954+STABILITY: POSITION/ELEVATION WELL
AJ3954_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3954+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3954_ROD/PIPE-DEPTH:  7.3 meters
AJ3954_SLEEVE-DEPTH  :  0.8 meters
AJ3954
AJ3954  HISTORY     - Date     Condition        Report By
AJ3954  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3954
AJ3954                          STATION DESCRIPTION
AJ3954
AJ3954'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3954'THE STATION IS LOCATED ABOUT 8.5 MI (13.7 KM) SOUTHWEST OF THE TOWN OF
AJ3954'WINTERSBURG, TOWNSHIP 01 SOUTH, RANGE 07 WEST, SECTION 22
AJ3954'OWNERSHIP - STATE LAND DEPARTMENT
AJ3954'TO REACH THE STATION FROM INTERSTATE 10 AND WINTERSBURG INTERCHANGE
AJ3954'(EXIT 98) , DRIVE SOUTH ON WINTERSBURG ROAD (383RD AVENUE) FOR 9.4 MI
AJ3954'(15.1 KM) TO ELLIOT ROAD, THENCE TURN RIGHT (WEST) ON TO ELLIOT ROAD
AJ3954'AND DRIVE FOR 3.4 MI (5.5 KM) TO A CATTLE GUARD, A BARBED WIRE FENCE
AJ3954'BEARING NORTH AND SOUTH AND END OF PAVEMENT, THENCE CONTINUE WEST ON
AJ3954'ELLIOT ROAD (A GRADED DIRT ROAD) FOR 1.1 MI (1.8 KM) TO AN UNMARKED
AJ3954'DIRT ROAD ON YOUR LEFT (SOUTH) , THENCE TURN LEFT (SOUTH) ON TO DIRT
AJ3954'ROAD AND DRIVE 1.0 MI (1.6 KM) TO AN UNMARKED DIRT ROAD, THENCE TURN
AJ3954'RIGHT (WEST) ON TO DIRT ROAD AND DRIVE 1.0 MI (1.6 KM) TO THE STATION
AJ3954'ON YOUR LEFT
AJ3954'MONUMENT DESCRIPTION - THE STATION IS MARKED BY AN ALUMINUM CAP
AJ3954'COMPRESSED ON A 24.0 FT (7.3 M) STAINLESS STEEL ROD DRIVEN TO REFUSAL,
AJ3954'ENCASED IN A 1 INCH GREASED PVC SLEEVE ENCLOSED IN A 5 INCH PVC PIPE
AJ3954'WITH A COUNTY LOGO ACCESS COVER STAMPED 3BN2 1999, SURROUNDED WITH A
AJ3954'CONCRETE COLLAR FLUSH WITH THE GROUND, WITNESSED BY A WHITE CARSONITE
AJ3954'MARKER
AJ3954'STATION TIES
AJ3954'99 FT (30.2 M) SOUTHEAST OF G.L.O.  BRASS CAP NORTHWEST CORNER SECTION
AJ3954'22, TOWNSHIP 1 SOUTH, RANGE 7 WEST
AJ3954'40 FT (12.2 M) SOUTH OF CENTERLINE OF DIRT ROAD
```

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AJ3954'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3954'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.

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1        National Geodetic Survey,   Retrieval Date = DECEMBER 27, 2011
 AJ3956 ***********************************************************************
 AJ3956  HT_MOD      -  This is a Height Modernization Survey Station.
 AJ3956  DESIGNATION -  3BP2
 AJ3956  PID         -  AJ3956
 AJ3956  STATE/COUNTY-  AZ/MARICOPA
 AJ3956  USGS QUAD   -  FOURTH OF JULY BUTTE (1989)
 AJ3956
 AJ3956                        *CURRENT SURVEY CONTROL
 AJ3956
 AJ3956* NAD 83(2007)-  33 20 01.45900(N)    113 03 57.81150(W)     ADJUSTED
 AJ3956* NAVD 88     -       308.85   (meters)    1013.3    (feet)  GPS OBS
 AJ3956
 AJ3956  EPOCH DATE  -        2007.00
 AJ3956  X           -  -2,089,998.481 (meters)                     COMP
 AJ3956  Y           -  -4,907,987.317 (meters)                     COMP
 AJ3956  Z           -   3,485,094.963 (meters)                     COMP
 AJ3956  LAPLACE CORR-           1.52  (seconds)                    DEFLEC09
 AJ3956  ELLIP HEIGHT-         277.665 (meters)          (02/10/07) ADJUSTED
 AJ3956  GEOID HEIGHT-         -31.21  (meters)                     GEOID09
 AJ3956
 AJ3956  ------- Accuracy Estimates (at 95% Confidence Level in cm) --------
 AJ3956  Type    PID    Designation                       North   East  Ellip
 AJ3956  ---------------------------------------------------------------------
 AJ3956  NETWORK AJ3956 3BP2                               0.73   0.67   1.16
 AJ3956  ---------------------------------------------------------------------
 AJ3956
 AJ3956.The horizontal coordinates were established by GPS observations
 AJ3956.and adjusted by the National Geodetic Survey in February 2007.
 AJ3956
 AJ3956.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
 AJ3956.See National Readjustment for more information.
 AJ3956.The horizontal coordinates are valid at the epoch date displayed above.
 AJ3956.The epoch date for horizontal control is a decimal equivalence
 AJ3956.of Year/Month/Day.
 AJ3956
 AJ3956.The orthometric height was determined by GPS observations and a
 AJ3956.high-resolution geoid model using precise GPS observation and
 AJ3956.processing techniques.
 AJ3956
 AJ3956.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 AJ3956
 AJ3956.The Laplace correction was computed from DEFLEC09 derived deflections.
 AJ3956
 AJ3956.The ellipsoidal height was determined by GPS observations
 AJ3956.and is referenced to NAD 83.
 AJ3956
 AJ3956.The geoid height was determined by GEOID09.
 AJ3956
 AJ3956;                    North         East     Units Scale Factor Converg.
 AJ3956;SPC AZ C     -   259,351.747   106,359.671   MT  1.00004111   -0 37 54.0
```

```
AJ3956;SPC AZ C      -   850,891.56    348,949.05   iFT  1.00004111   -0 37 54.0
AJ3956;UTM  12       - 3,690,191.860   307,710.663   MT  1.00005589   -1 08 08.4
AJ3956
AJ3956!              -  Elev Factor  x  Scale Factor =   Combined Factor
AJ3956!SPC AZ C      -   0.99995641  x   1.00004111  =   0.99999752
AJ3956!UTM  12       -   0.99995641  x   1.00005589  =   1.00001230
AJ3956
AJ3956                          SUPERSEDED SURVEY CONTROL
AJ3956
AJ3956  NAD 83(1992)-  33 20 01.45807(N)    113 03 57.81131(W) AD(       ) B
AJ3956  ELLIP H (04/12/01)  277.692  (m)                       GP(       ) 3 2
AJ3956
AJ3956.Superseded values are not recommended for survey control.
AJ3956.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AJ3956.See file dsdata.txt to determine how the superseded data were derived.
AJ3956
AJ3956_U.S. NATIONAL GRID SPATIAL ADDRESS: 12SUB0771090191(NAD 83)
AJ3956_MARKER: I = METAL ROD
AJ3956_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AJ3956_STAMPING: 3BP2 1999
AJ3956_MARK LOGO: MCDOT
AJ3956_PROJECTION: FLUSH
AJ3956_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ3956_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AJ3956+STABILITY: POSITION/ELEVATION WELL
AJ3956_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ3956+SATELLITE: SATELLITE OBSERVATIONS - 1999
AJ3956_ROD/PIPE-DEPTH:  9.1 meters
AJ3956_SLEEVE-DEPTH  :  0.8 meters
AJ3956
AJ3956  HISTORY     - Date     Condition        Report By
AJ3956  HISTORY     - 1999     MONUMENTED       MCDOT
AJ3956
AJ3956                          STATION DESCRIPTION
AJ3956
AJ3956'DESCRIBED BY MARICOPA CO DOT 1999 (JJR)
AJ3956'THE STATION IS LOCATED ABOUT 13 MI (20.9 KM) SOUTHWEST OF THE TOWN OF
AJ3956'WINTERSBURG, TOWNSHIP 01 SOUTH, RANGE 08 WEST, SECTION 22
AJ3956'OWNERSHIP - BUREAU OF LAND MANAGEMENT
AJ3956'TO REACH THE STATION FROM INTERSTATE 10 AND WINTERSBURG INTERCHANGE
AJ3956'(EXIT 98) , DRIVE SOUTH ON WINTERSBURG ROAD (383RD AVENUE) FOR 9.4 MI
AJ3956'(15.1 KM) TO ELLIOT ROAD, THENCE TURN RIGHT (WEST) ON TO ELLIOT ROAD
AJ3956'AND DRIVE FOR 3.4 MI (5.5 KM) TO A CATTLE GUARD, A BARBED WIRE FENCE
AJ3956'BEARING NORTH AND SOUTH AND END OF PAVEMENT, THENCE CONTINUE WEST ON
AJ3956'ELLIOT ROAD (A GRADED DIRT ROAD) FOR 2.7 MI (4.3 KM) TO A BEND IN
AJ3956'ELLIOT ROAD TO THE NORTHWEST, THENCE CONTINUE NORTHWEST ON ELLIOT ROAD
AJ3956'FOR 1.0 MI (1.6 KM) TO A BEND IN ELLIOT ROAD TO THE WEST (ELLIOT ROAD
AJ3956'CHANGES TO DOBBINS ROAD) , THENCE CONTINUE WEST ON DOBBINS ROAD FOR
AJ3956'4.1 MI (6.6 KM) TO AN UNMARKED DIRT ROAD ON YOUR LEFT (SOUTH) (DIRT
AJ3956'ROAD LOCATED 120 FEET (36.6 M) EAST OF CATTLE GUARD ACROSS DOBBINS
AJ3956'ROAD) , THENCE TURN LEFT (SOUTH) ON TO DIRT ROAD AND DRIVE FOR 1.0 MI
AJ3956'(1.6 KM) TO A WASH BEARING EAST AND WEST, THENCE CONTINUE SOUTH ON
AJ3956'DIRT ROAD FOR 1.0 MI (1.6 KM) TO AN UNMARKED DIRT ROAD WITH A GATE ON
AJ3956'YOUR RIGHT (WEST) , THENCE TURN RIGHT (WEST) ON TO DIRT ROAD THROUGH
AJ3956'GATE AND DRIVE 0.5 MI (0.8 KM) TO THE STATION ON YOUR LEFT
AJ3956'MONUMENT DESCRIPTION - THE STATION IS MARKED BY AN ALUMINUM CAP
AJ3956'COMPRESSED ON A 30.0 FT (9.1 M) STAINLESS STEEL ROD DRIVEN TO REFUSAL,
AJ3956'ENCASED IN A 1 INCH GREASED PVC SLEEVE ENCLOSED IN A 5 INCH PVC PIPE
AJ3956'WITH A COUNTY LOGO ACCESS COVER STAMPED 3BP2 1999, SURROUNDED WITH A
AJ3956'CONCRETE COLLAR FLUSH WITH THE GROUND, WITNESSED BY A WHITE CARSONITE
```

```
AJ3956'MARKER
AJ3956'STATION TIES
AJ3956'121 FT (36.9 M) SOUTHWEST OF POWER POLE
AJ3956'55 FT (16.8 M) SOUTH OF BARBED WIRE FENCE CORNER
AJ3956'FOR A TO REACH MAP, STATION IMAGES AND ADDITIONAL INFORMATION, YOU CAN
AJ3956'VISIT WWW.MCDOT.MARICOPA.GOV       SEARCH KEYWORD  GDACS

*** retrieval complete.
Elapsed Time = 00:00:02
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WILSON & COMPANY

SURVEYS & MAPPING

CONTROL REFERENCE SHEET

Point Name: 1

[X] Horizontal

[X] Vertical

Description 5/8" REBAR WITH WCI CAP STAMPED "1"

References

1) MAG NAIL & FEATHER IN WEST FACE OF PALO VERDE TREE — NE 73 70

2) MAG NAIL & FEATHER IN SOUTH FACE OF PALO VERDE TREE — NNW 50 90

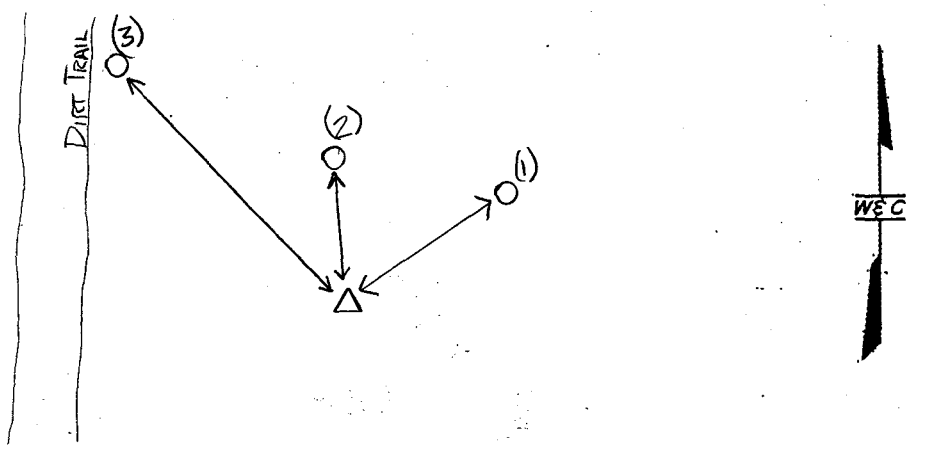
3) 1 1/2" DIA IRON PIPE WITH 8' TALL PVC PIPE BY IT — NW 101 15

4)

5)

6) Sta. Offset

Sketch



Location:

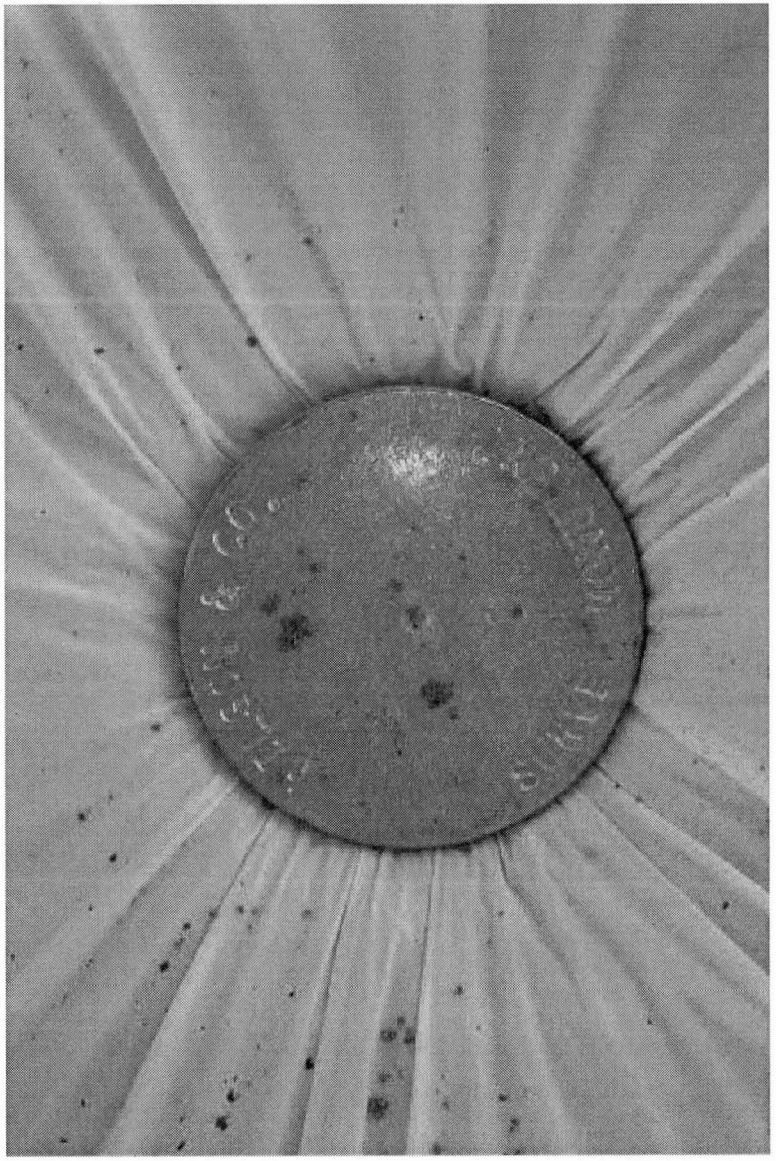
Project No: 0930018608

Date: 12/27/2011

Crew Chief: D. BRANFORT

1 West

1 South



1 close

1 North

1 East

WILSON & COMPANY

SURVEYS & MAPPING

CONTROL REFERENCE SHEET

Point Name: 3

[x] Horizontal

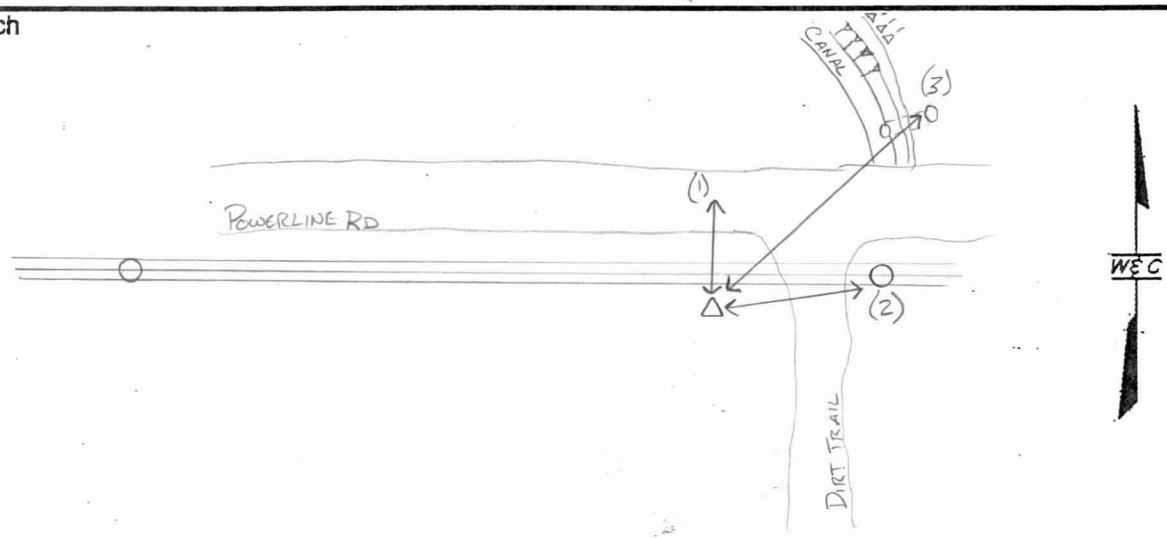
[x] Vertical

Description 5/8" REBAR WITH WCI CAP STAMPED "3"

References

1) APPARENT ℄ OF EAST-WEST POWER LINE RD	N 19 80
2) MAG NAIL & FEATHER IN SOUTH FACE OF POWER POLE	ENE 51 45
3) TOP OF THE EAST END OF OLD RCP CULVERT PIPE	NE 58 80
4)	
5)	
6) Sta. Offset	

Sketch

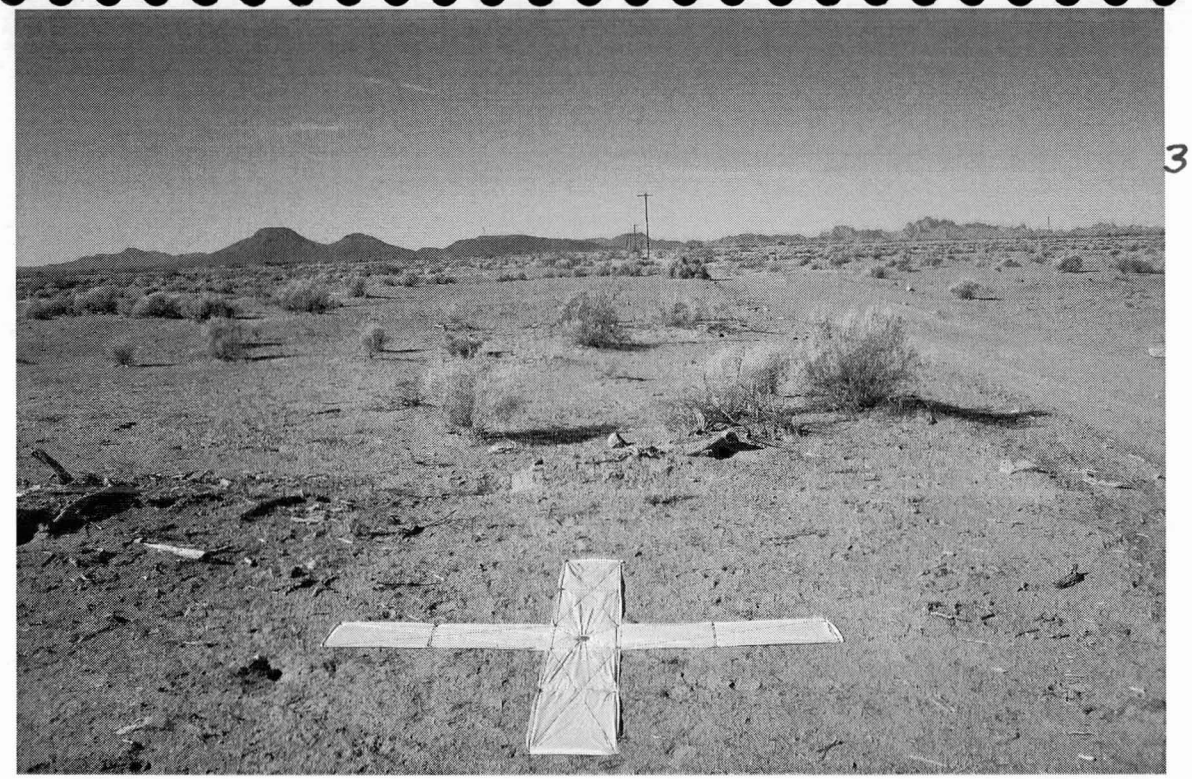


Location:

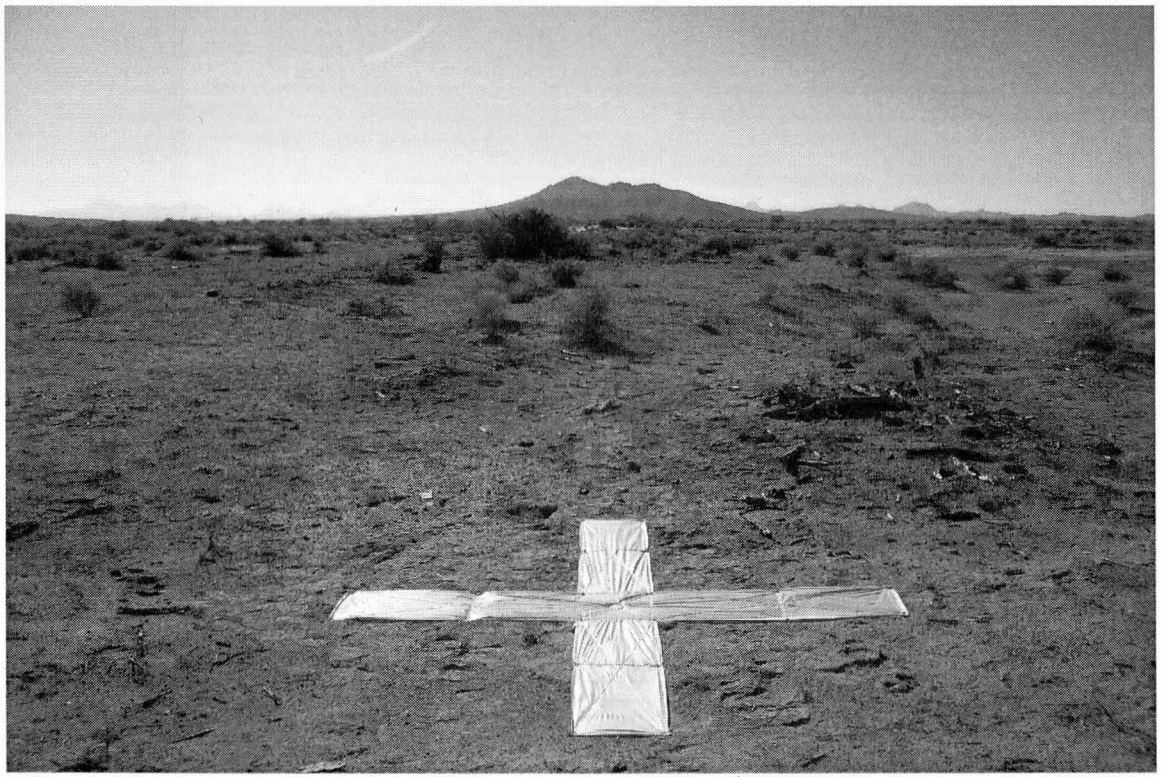
Project No: 0930018608

Date: 12/29/2011

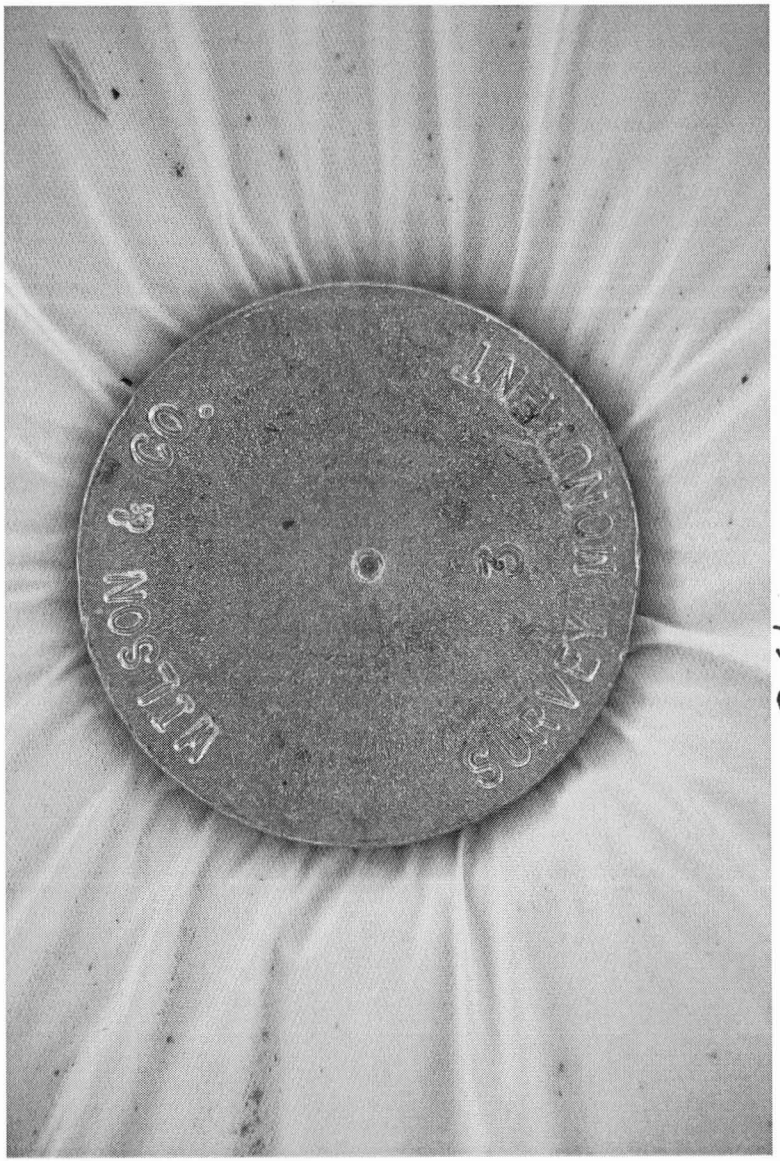
Crew Chief: D. BRANFORT



3 WEST



3 South



3 Close

3 NORTH

3 East

WILSON & COMPANY

SURVEYS & MAPPING

CONTROL REFERENCE SHEET

Point Name: 5

[X] **Horizontal**

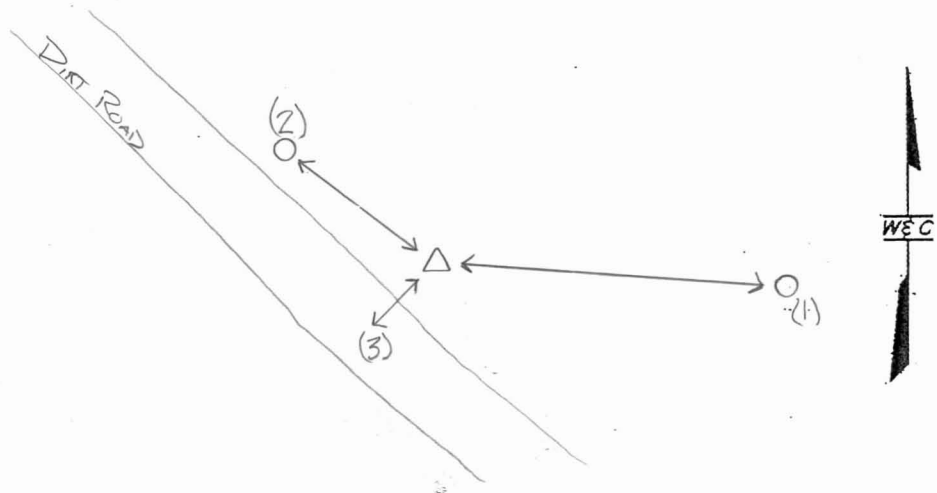
[X] **Vertical**

Description 1/2" REBAR WITH TAG MARKED "5 WC1" WIRED TO IT

References

1) NAIL IN SOUTH FACE OF A 14" DIAMETER PALO VERDE TREE	ESE 35.05
2) 18" DIAMETER SAGUARO CACTUS	NW 34.75
3) APPARENT ℄ OF DIRT TRAIL	SW 14.70
4)	
5)	
6) Sta. Offset	

Sketch



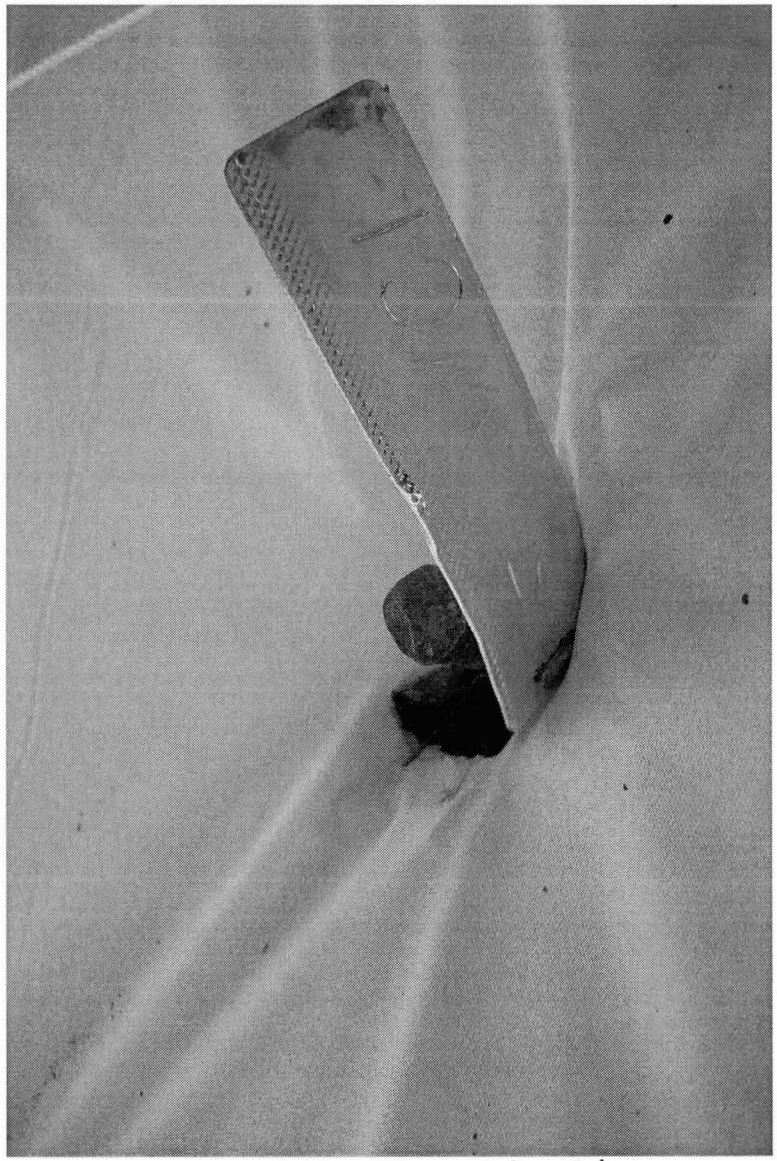
Location:

Project No: 0930018606

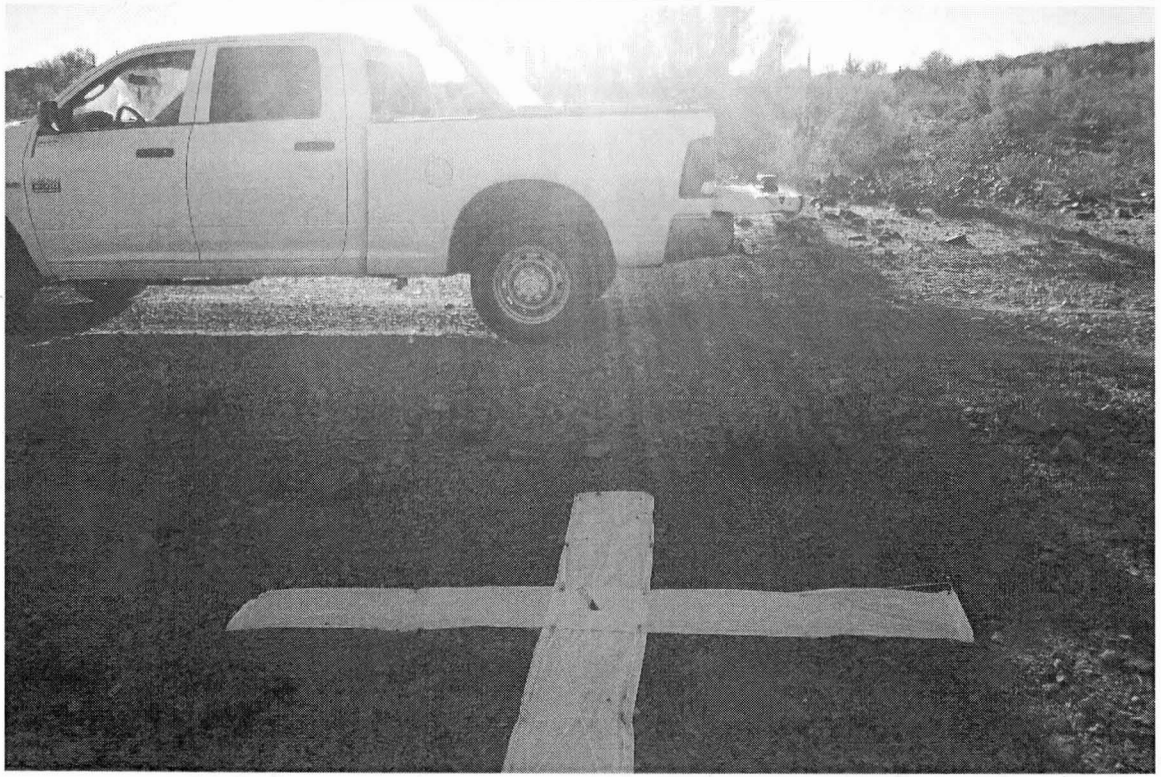
Date: 12/29/2011

Crew Chief: D. BRANFORT

5 West



5 Close



5 South

5 North

5 East

WILSON & COMPANY

SURVEYS & MAPPING

CONTROL REFERENCE SHEET

Point Name: 7

☒ **Horizontal**

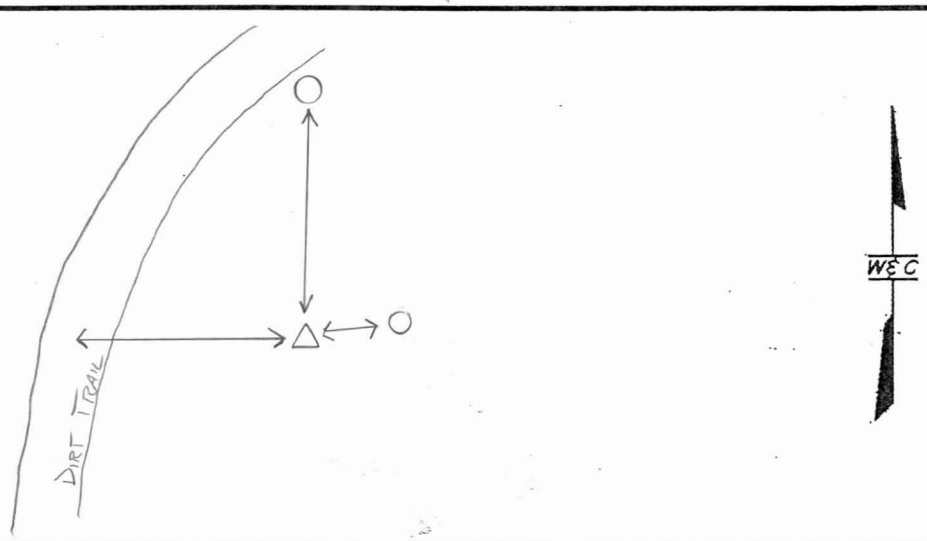
☒ **Vertical**

Description 5/8" REBAR WITH WCI CAP STAMPED "7"

References

1) 1.5' DIAMETER CREOSOTE BUSH WITH PINK FLAGGING	N 43 40
2) APPARENT ℄ OF DIRT ROAD	W 22 70
3) 2' DIAMETER CREOSOTE BUSH WITH PINK FLAGGING	ENE 8 90
4)	
5)	
6) Sta. Offset	

Sketch



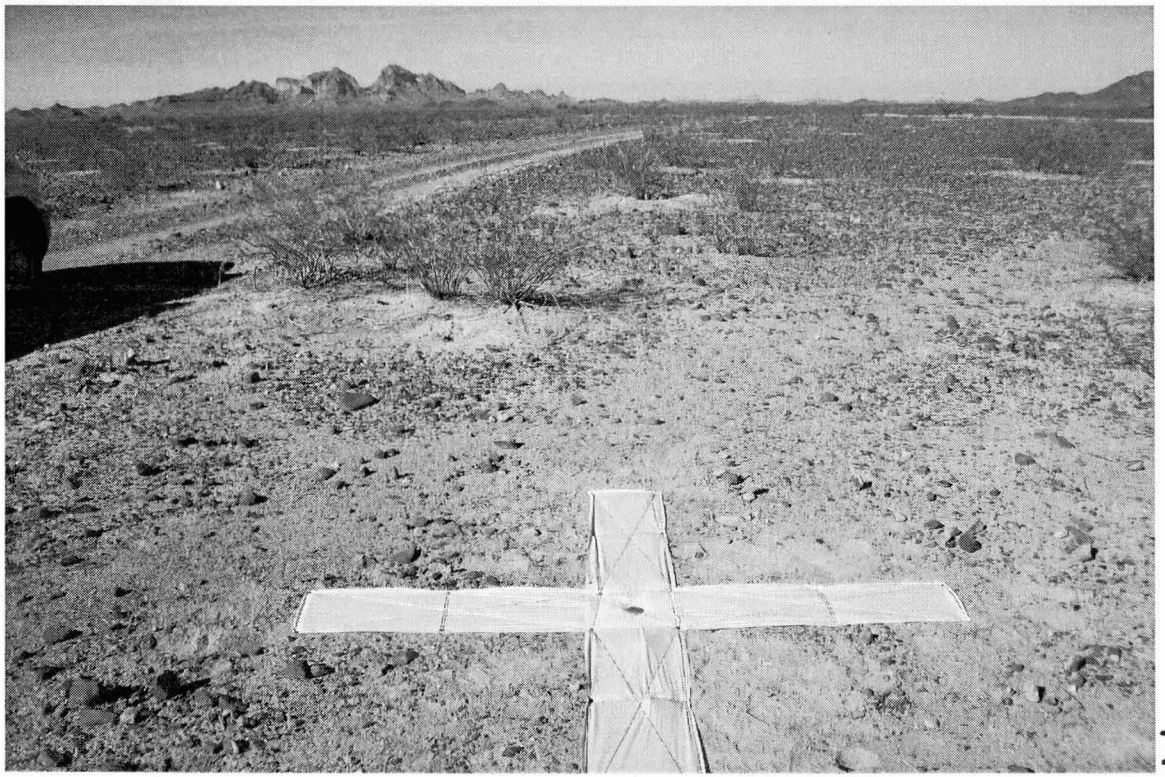
Location:

Project No: 0930018608

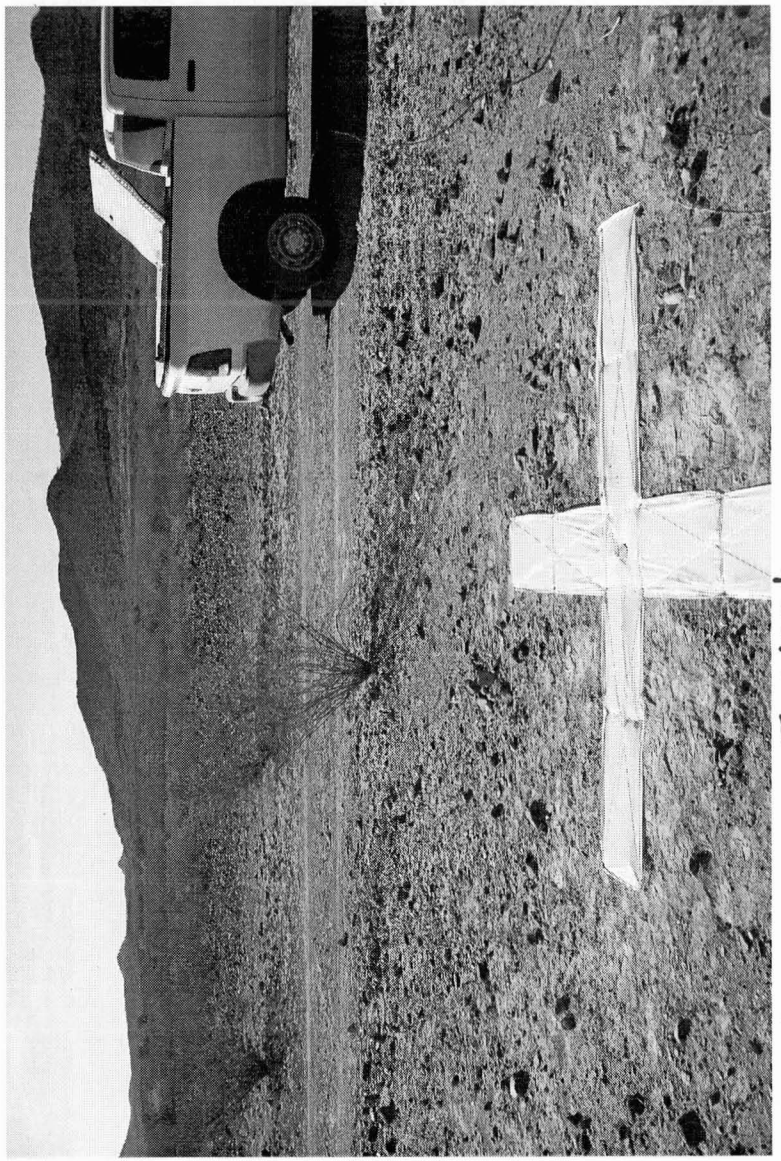
Date: 12/29/2011

Crew Chief: D. BRANFORT

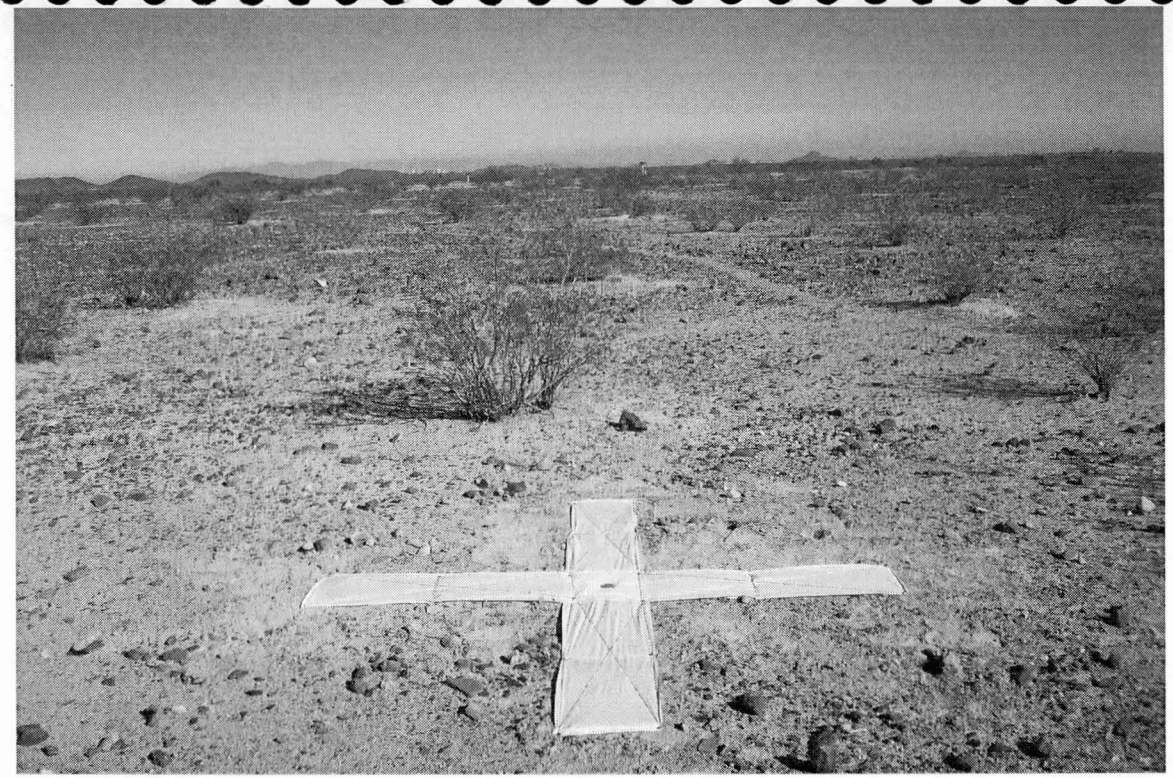
7 South



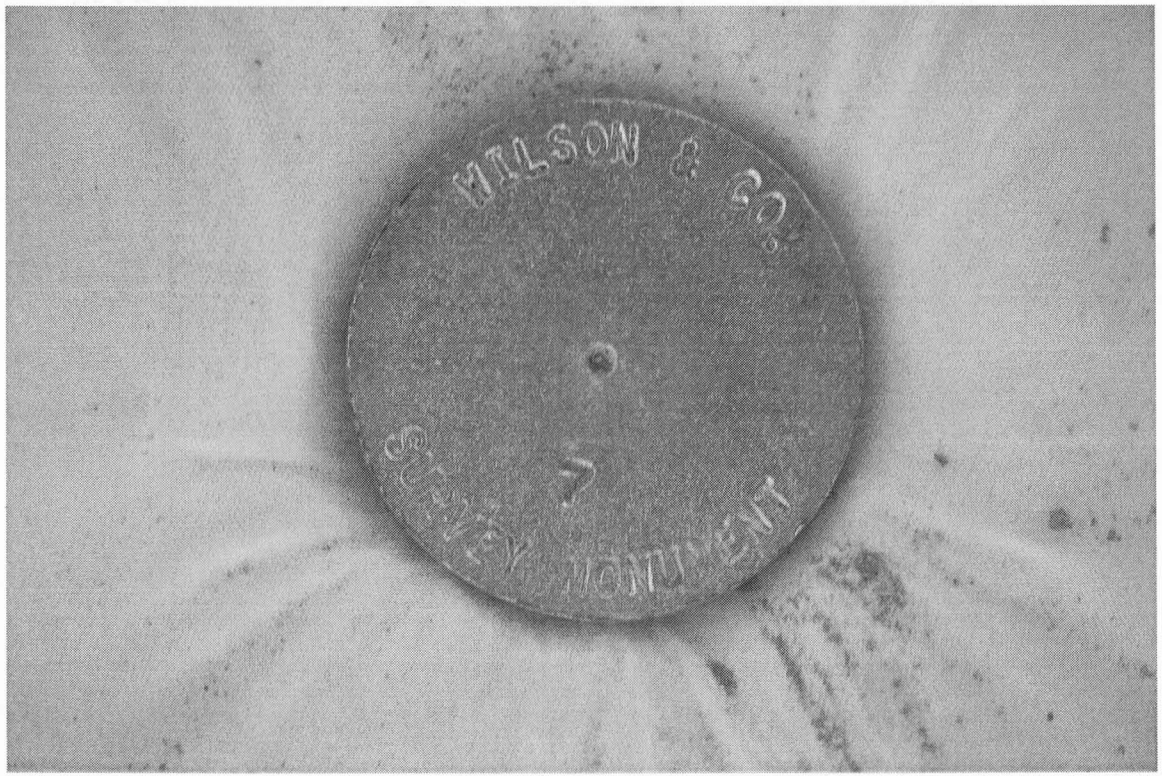
7 North



7 West



7 east



7 Close

WILSON & COMPANY

SURVEYS & MAPPING

CONTROL REFERENCE SHEET

Point Name: 9

[X] **Horizontal**

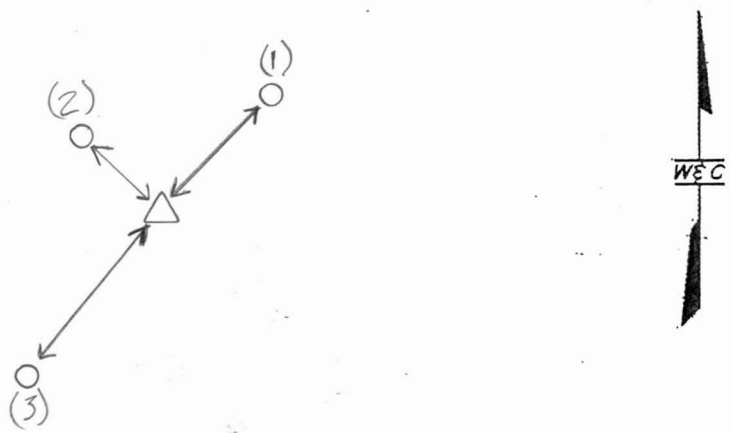
[X] **Vertical**

Description 1/2" REBAR WITH TAG MARKED "9 WCI" WIRED TO IT

References

1) 2' DIAMETER CREOSOTE BUSH WITH PINK FLAGGING	NE	20 60
2) 1.5' DIAMETER CREOSOTE BUSH WITH PINK FLAGGING	NW	16 90
3) 1.5' DIAMETE CREOSOTE BUSH WITH PINK FLAGGING	SW	25 80
4)		
5)		
6) Sta. Offset		

Sketch



Location:

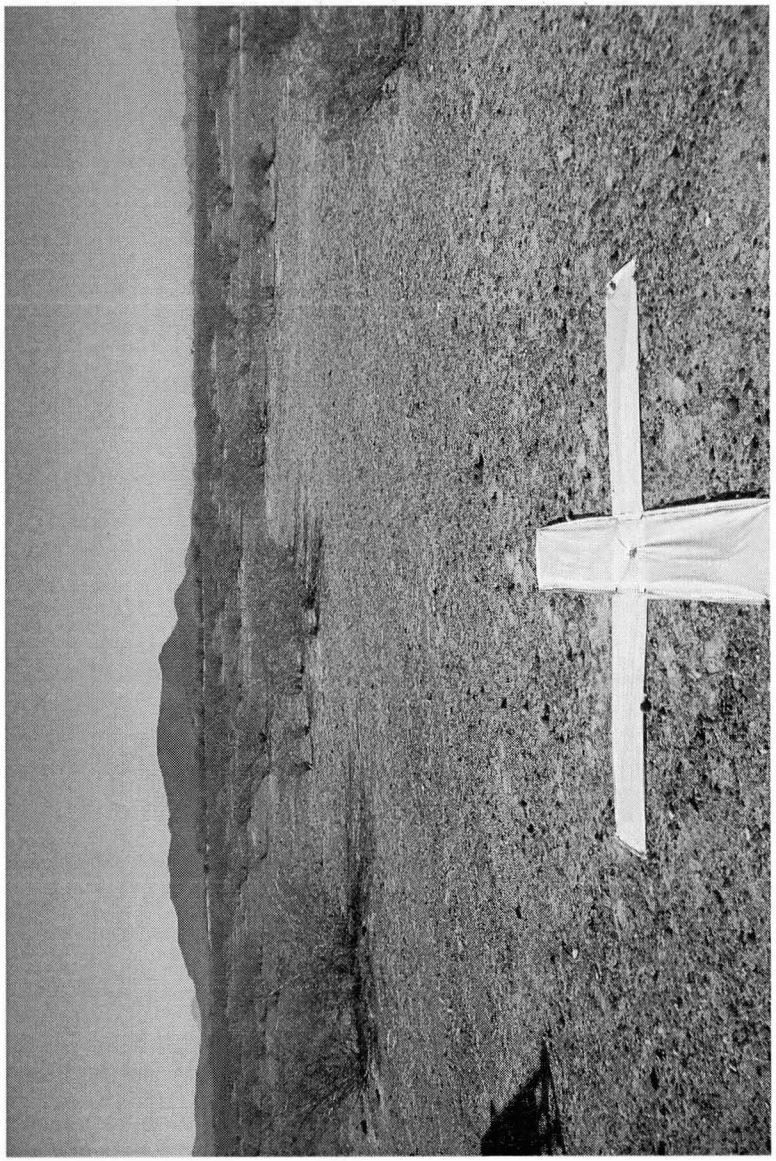
Project No: 0930018608

Date: 12/30/2011

Crew Chief: D. BRANFORT

9 South

9 North



9 West

9 East

9 Close

WILSON & COMPANY

SURVEYS & MAPPING

CONTROL REFERENCE SHEET

Point Name: 11

[X] **Horizontal**

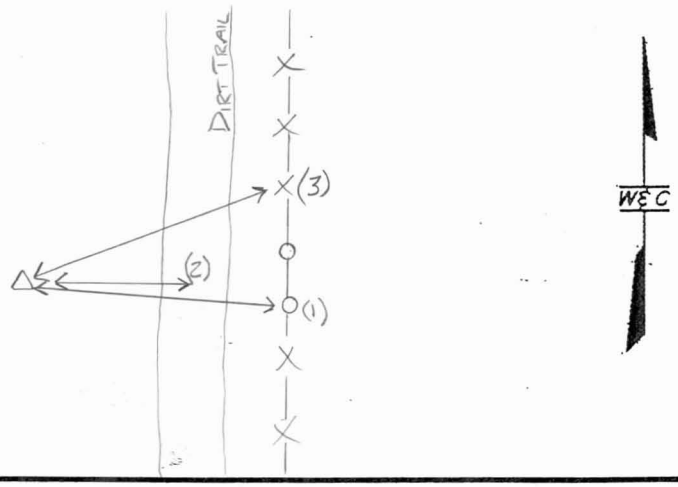
[X] **Vertical**

Description 5/8" REBAR WITH WCI CAP STAMPED "11"

References

1) SOUTH POST OF ALUMINUM H-POST IN NORTH-SOUTH FENCE LINE	ESE 31 70
2) APPARENT ℄ OF NORTH-SOUTH DIRT TRAIL	E 15 30
3) T-POST IN FENCE LINE WITH PINK FLAGGING	NE 40 50
4)	
5)	
6) Sta. Offset	

Sketch



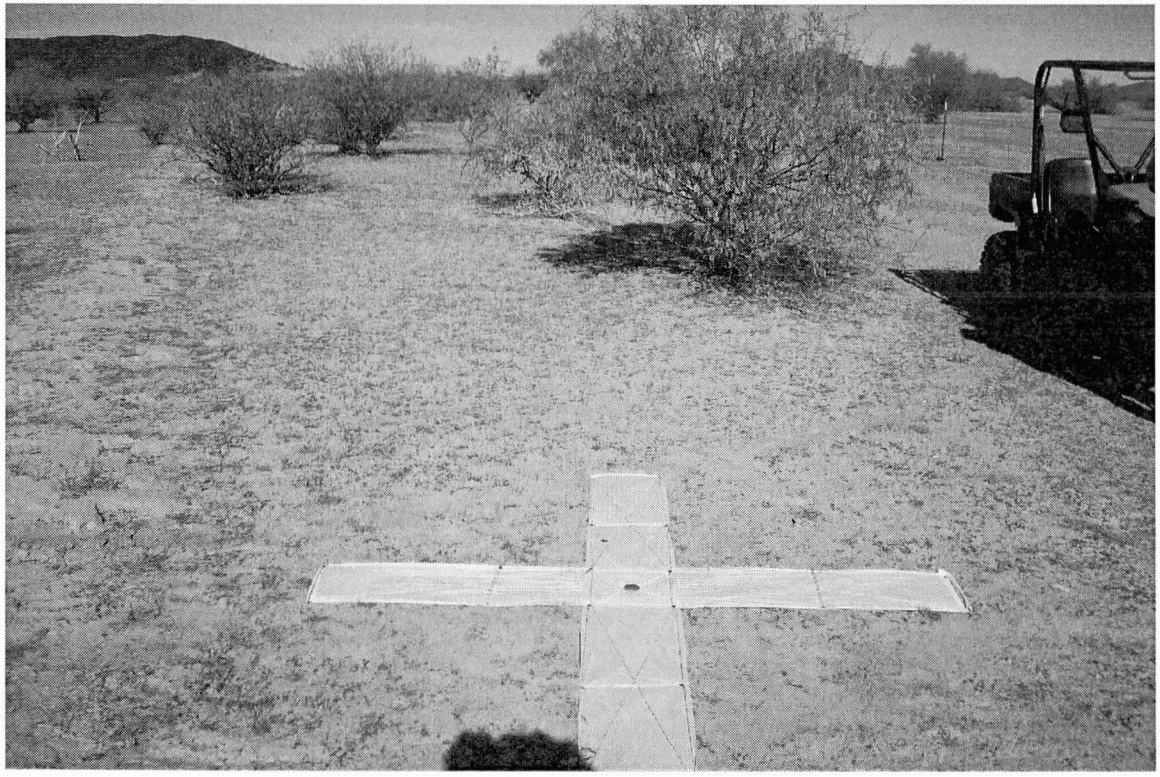
Location:

Project No: 0930018608

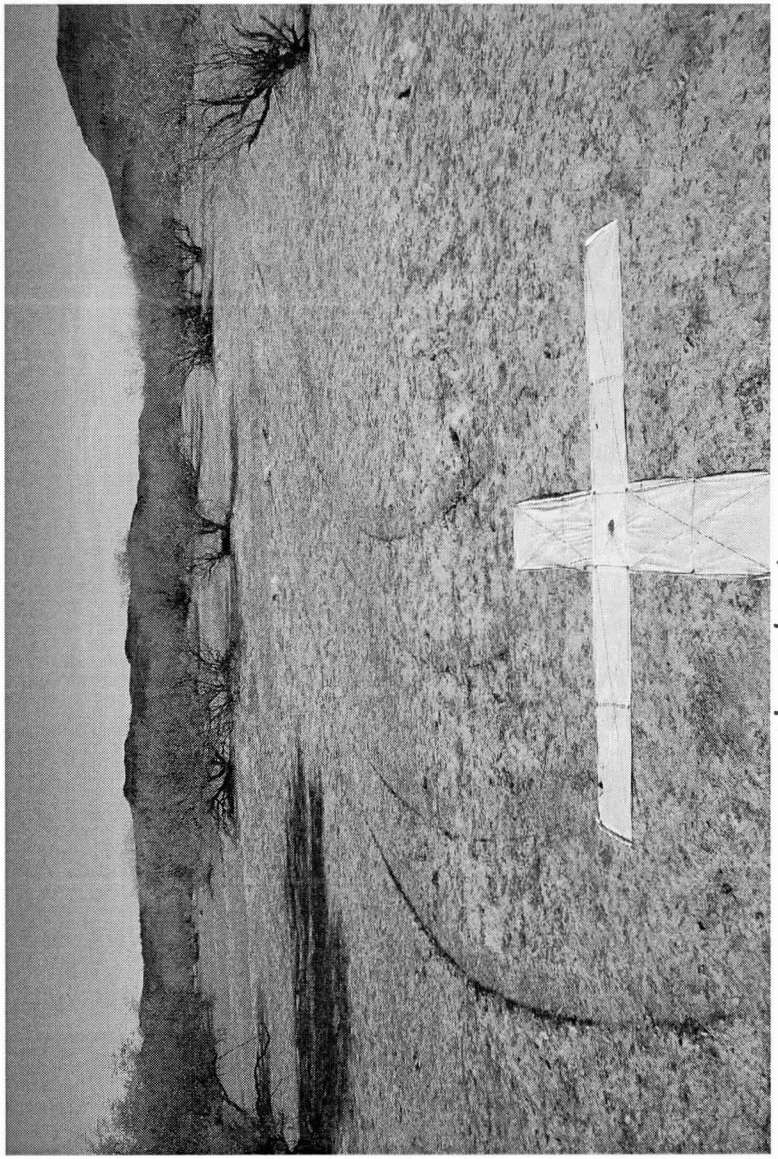
Date: 12/29/2011

Crew Chief: D. BRANFORT

// South

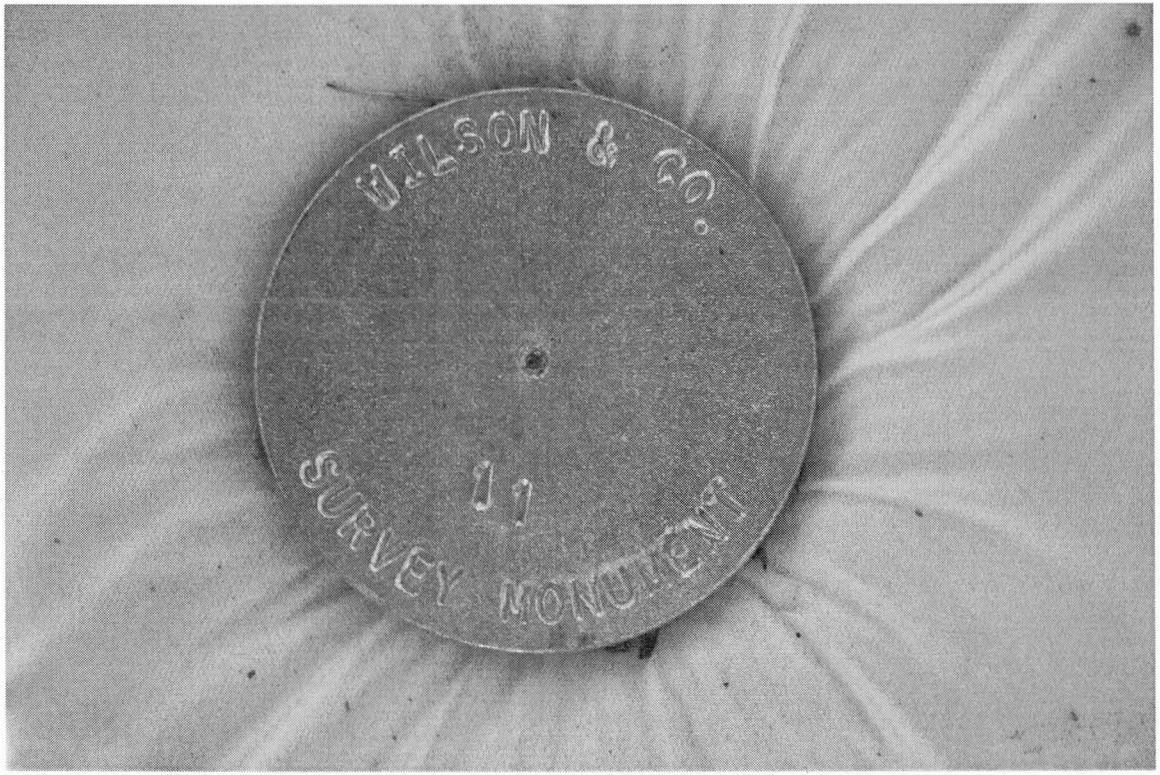


// North



// West

11 East



11 Close

WILSON & COMPANY

SURVEYS & MAPPING

CONTROL REFERENCE SHEET

Point Name: 13

☒ Horizontal

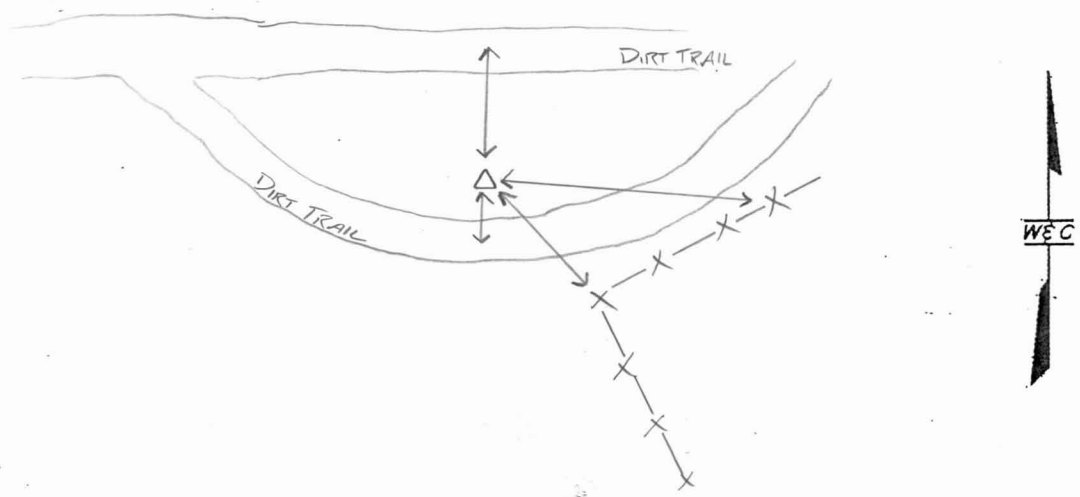
☒ Vertical

Description 5/8" REBAR WITH WCI CAP STAMPED "13"

References

1) MAG NAIL IN WEST SIDE OF CORNER POST	SE 54 85
2) MAG NAIL IN NORTH SIDE OF FENCE POST	ESE 74 75
3) APPARENT ℄ OF DIRT TRAIL	S 15 30
4) APPARENT ℄ OF DIRT TRAIL	N 25 70
5)	
6) Sta. Offset	

Sketch



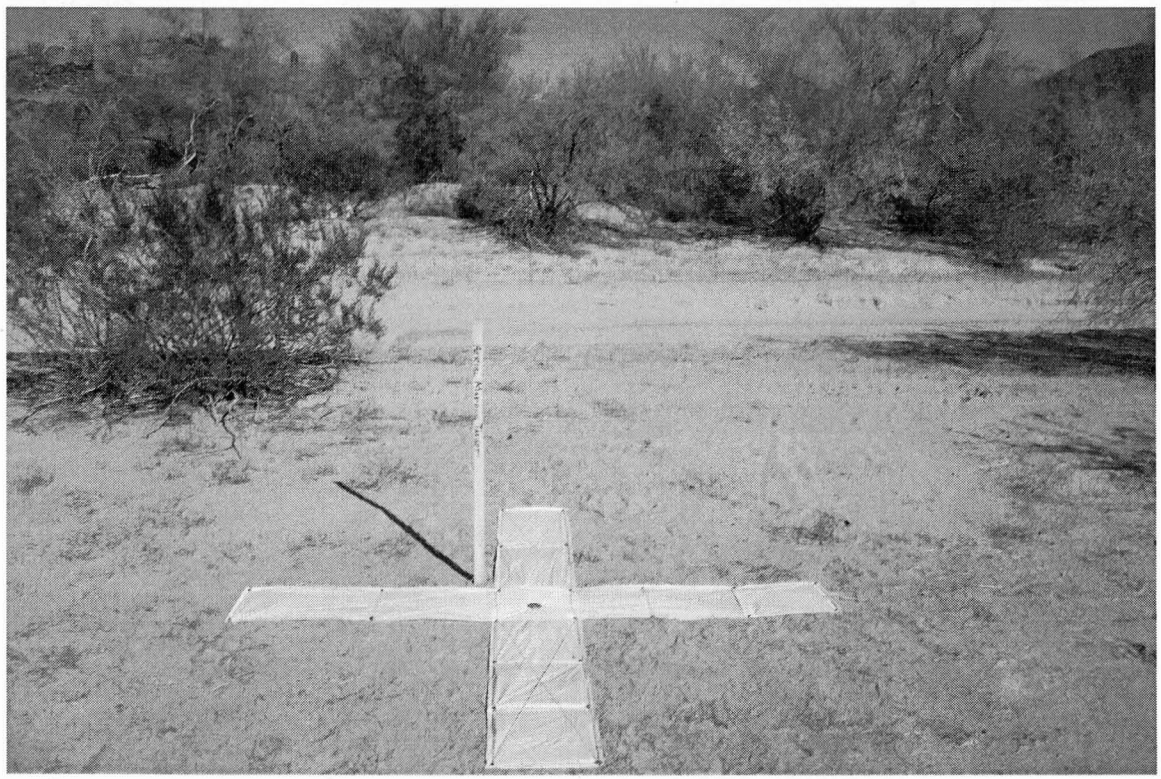
Location:

Project No: 0930018608

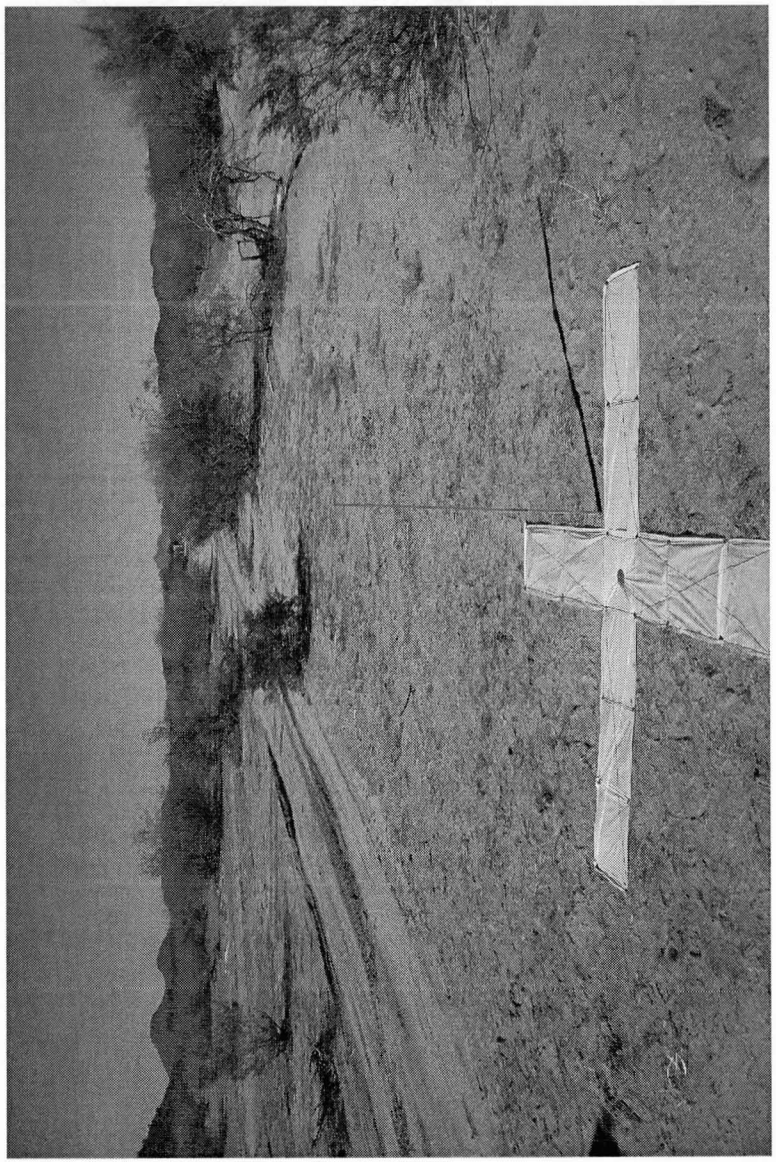
Date: 12/29/2011

Crew Chief: D. BRANFORT

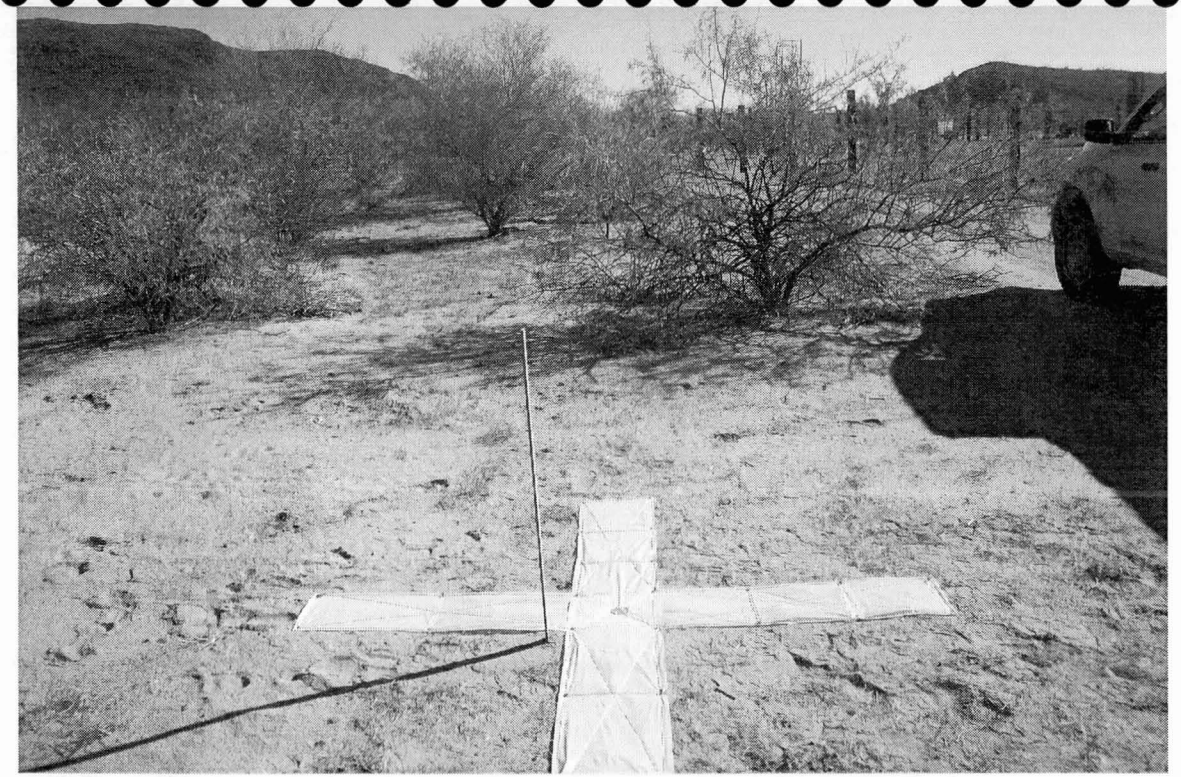
13 South



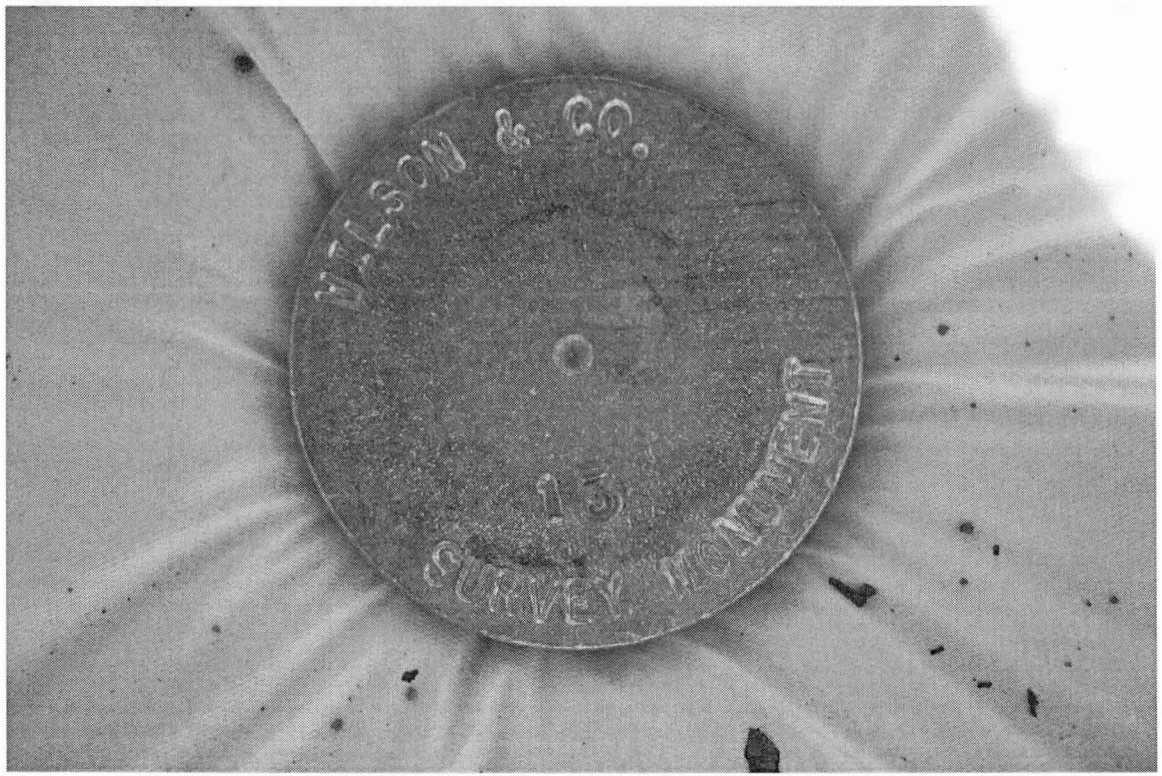
13 North



13 West



13 East



13 Close

WILSON & COMPANY

SURVEYS & MAPPING

CONTROL REFERENCE SHEET

Point Name: 15

☒ Horizontal

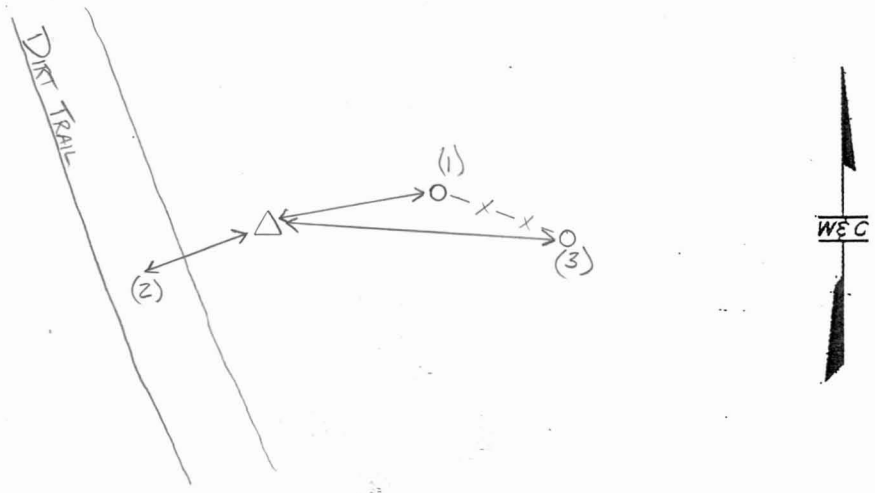
☒ Vertical

Description 1/2" REBAR WITH TAG MARKED "15 WCI" WIRED TO IT

References

1) MAG NAIL & FEATHER IN TOP OF OLD FENCE POST	ENE 58 50
2) APPARENT ℄ OF DIRT TRAIL	SW 33 00
3) MAG NAIL & FEATHER IN TOP OF FENCE POST	ESE 103 20
4)	
5)	
6) Sta. Offset	

Sketch

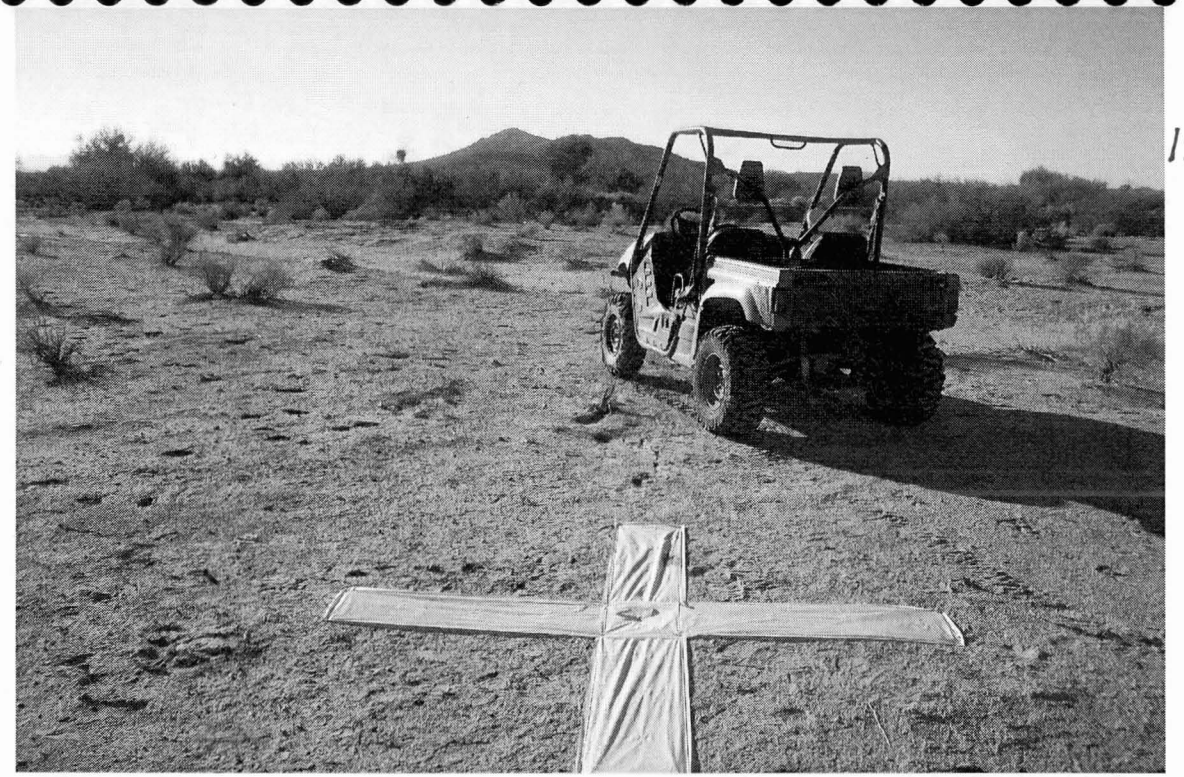


Location:

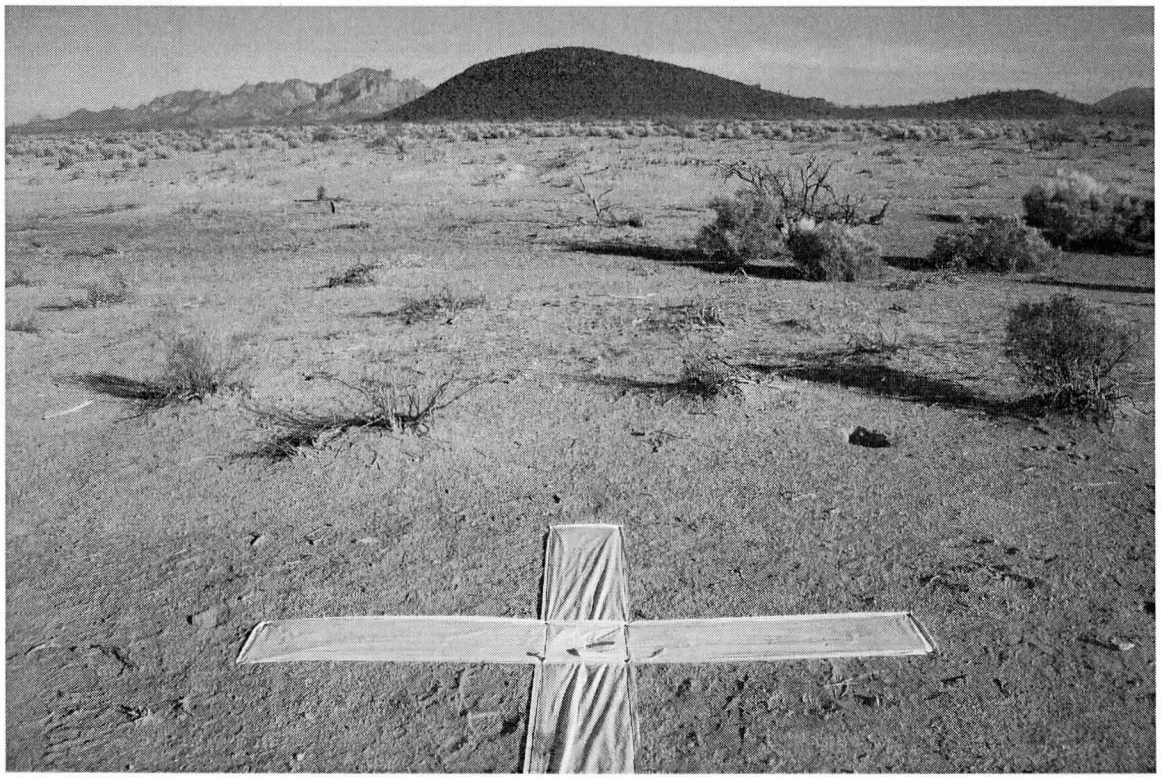
Project No: 0930018608

Date: 12/29/2011

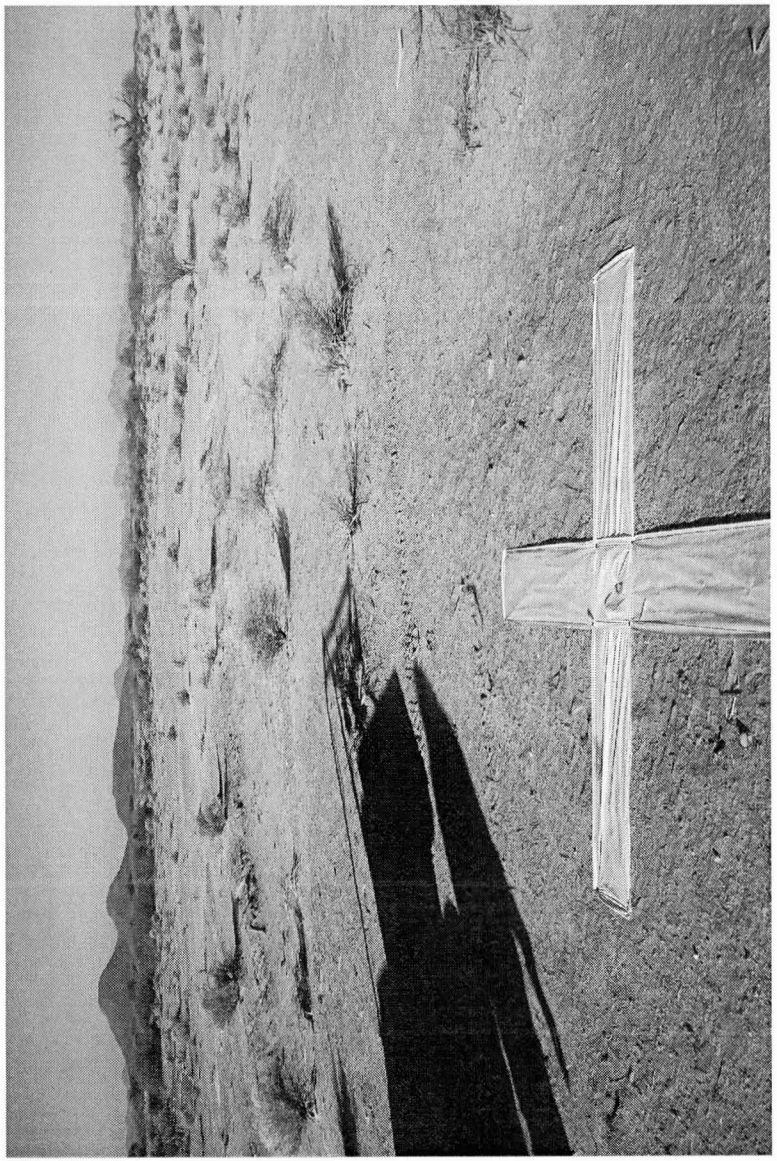
Crew Chief: D. BRANFORT



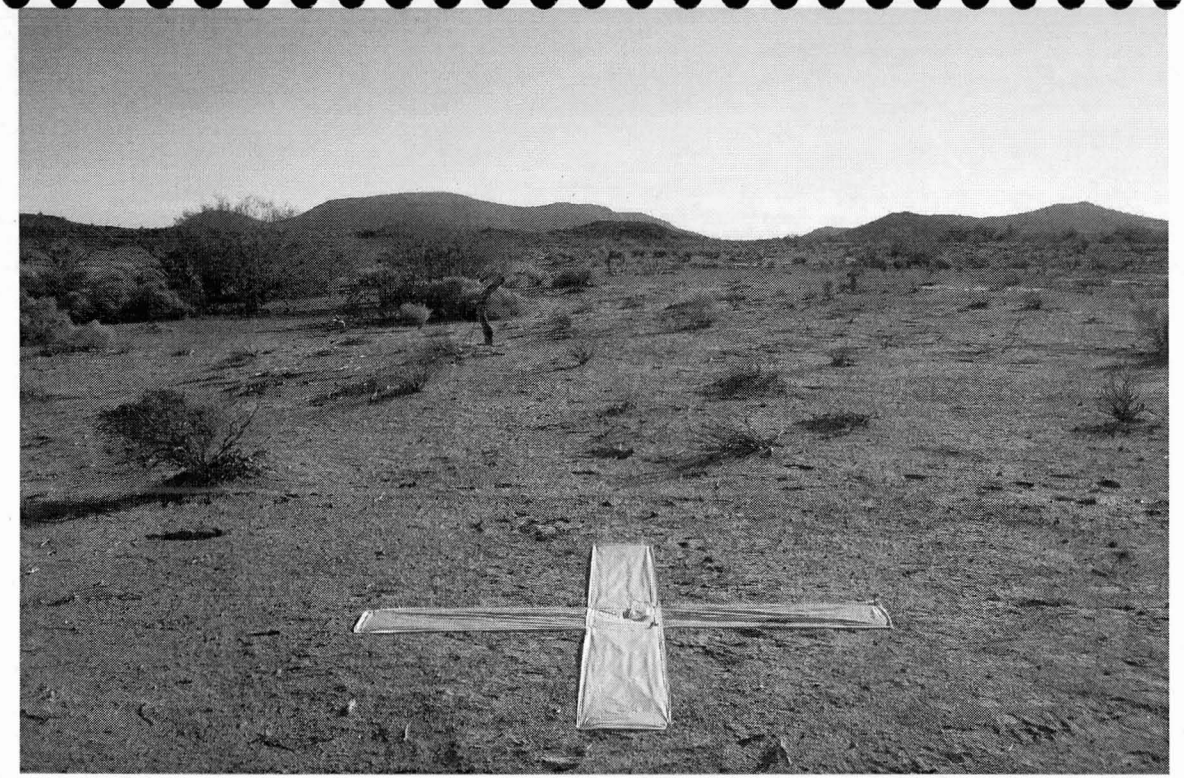
15 South



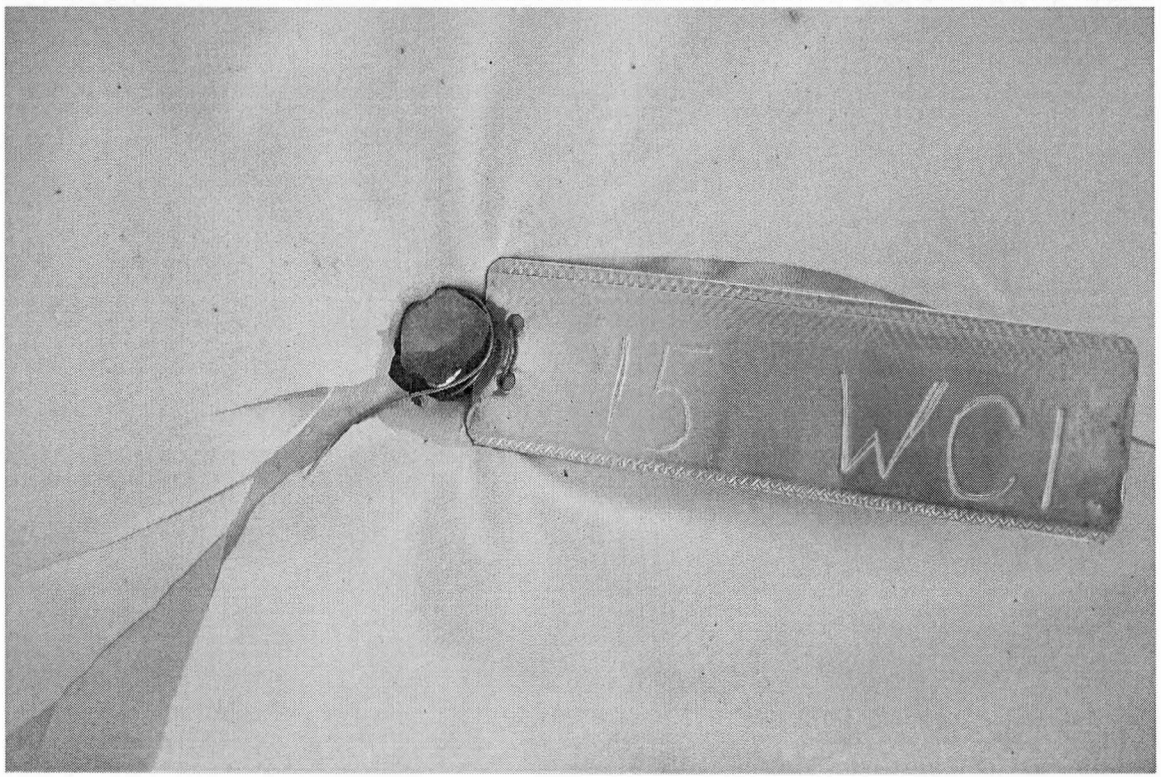
15 North



15 West



15 East



15 Close

WILSON & COMPANY

SURVEYS & MAPPING

CONTROL REFERENCE SHEET

Point Name: 17

☒ Horizontal

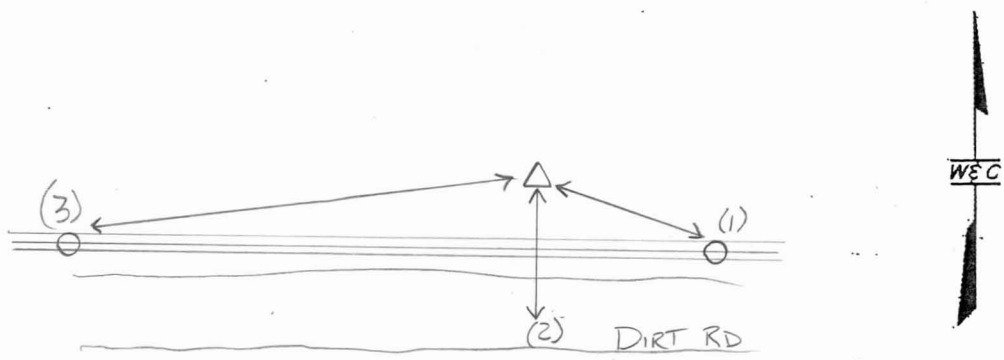
☒ Vertical

Description 5/8" REBAR WITH WCI CAP STAMPED "17"

References

1) MAG NAIL & FEATHER IN NORTH FACE OF POWER POLE	SE 91 55
2) ℄ OF EAST-WEST POWERLINE ROAD	S 60 00
3) MAG NAIL & FEATHER IN NORTH FACE OF POWER POLE	SW 456 5
4)	
5)	
6) Sta. Offset	

Sketch



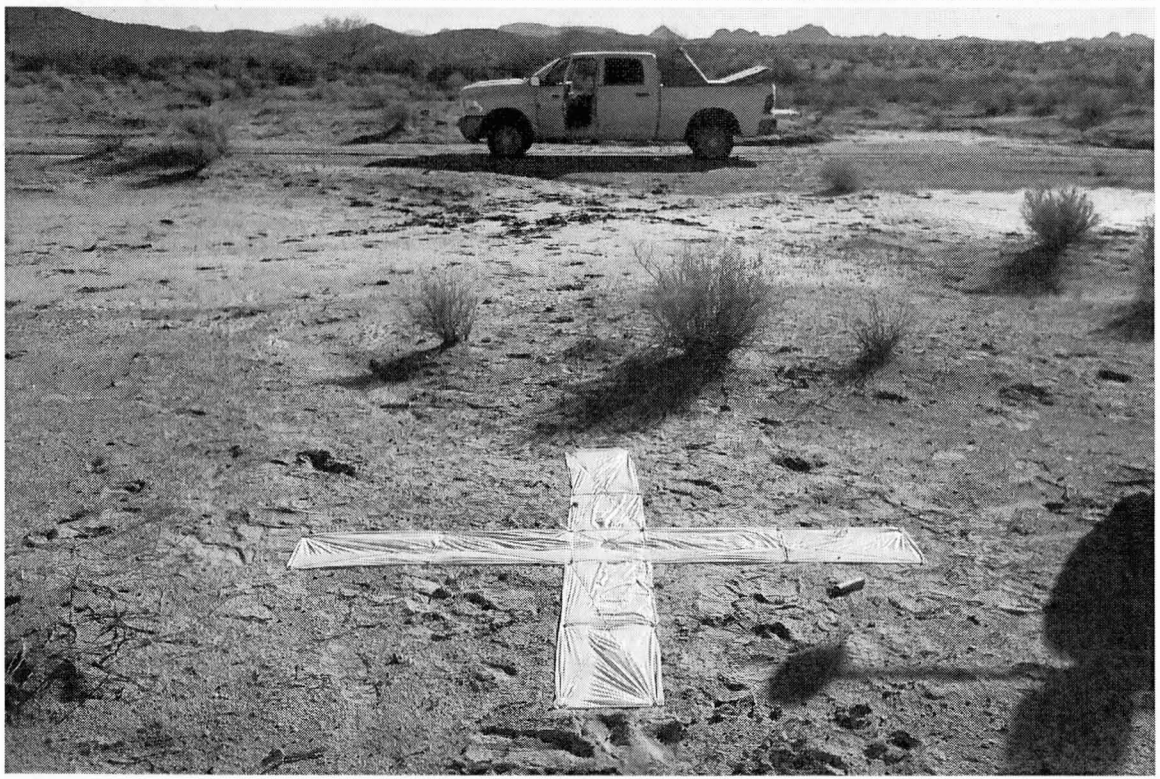
Location:

Project No: 093001860 8

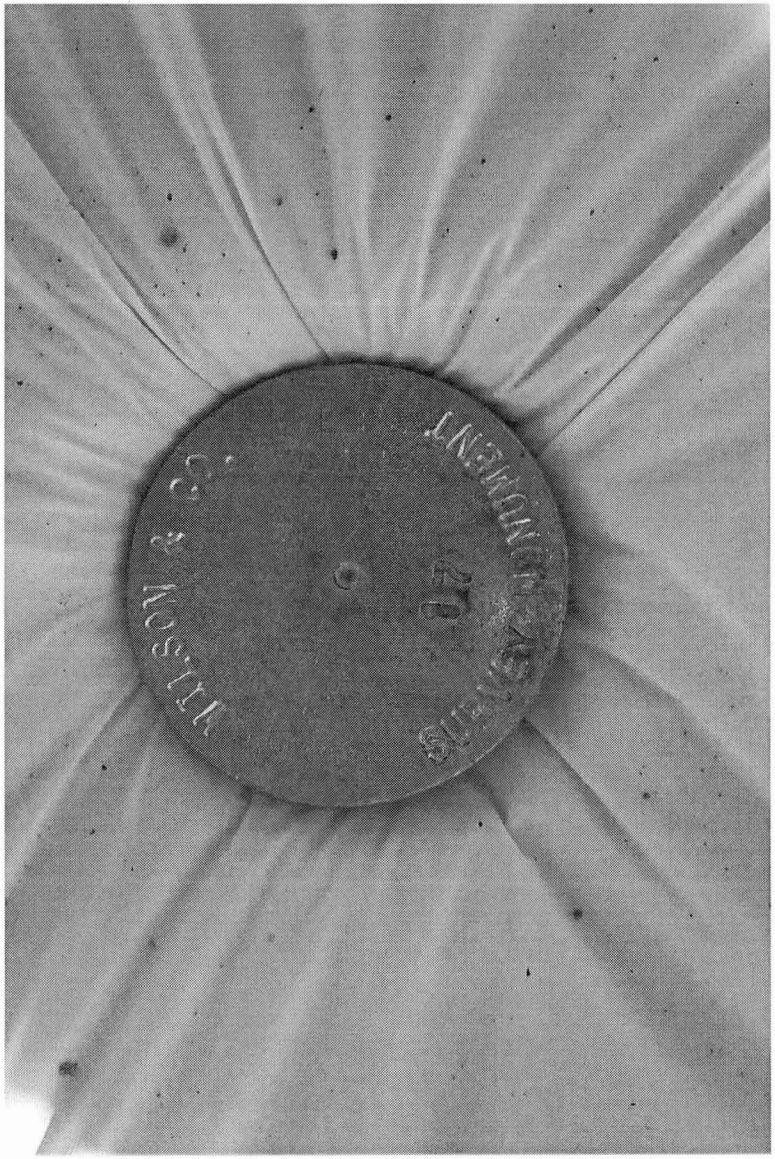
Date: 12/27/2011

Crew Chief: D. BRANFORT

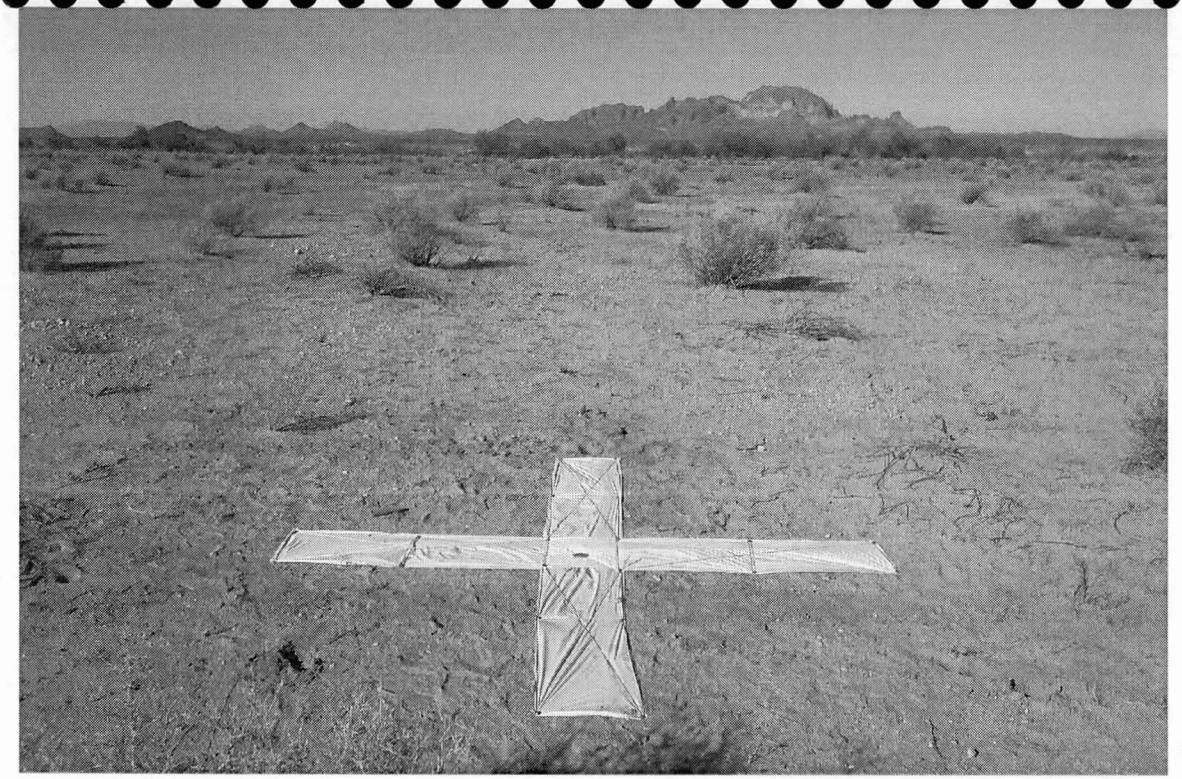
17 East



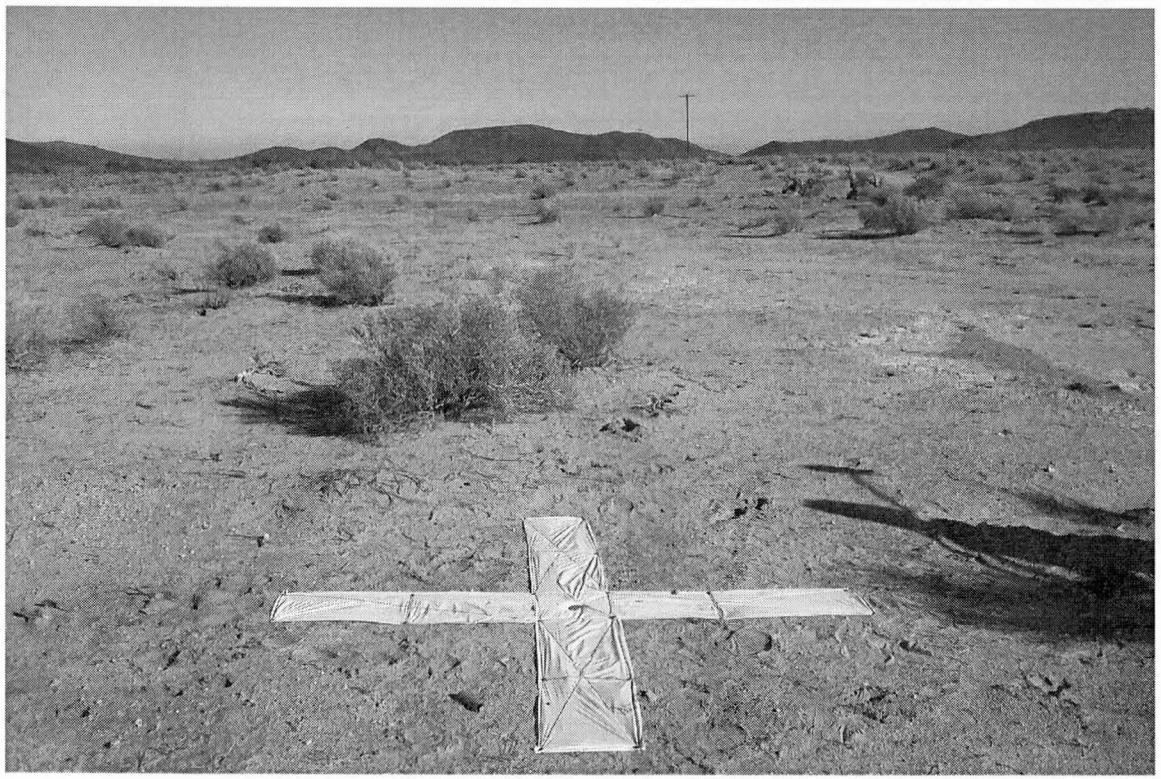
17 South



17 Close



17 North



17 East

WILSON & COMPANY

SURVEYS & MAPPING

CONTROL REFERENCE SHEET

Point Name: 19

[X] Horizontal

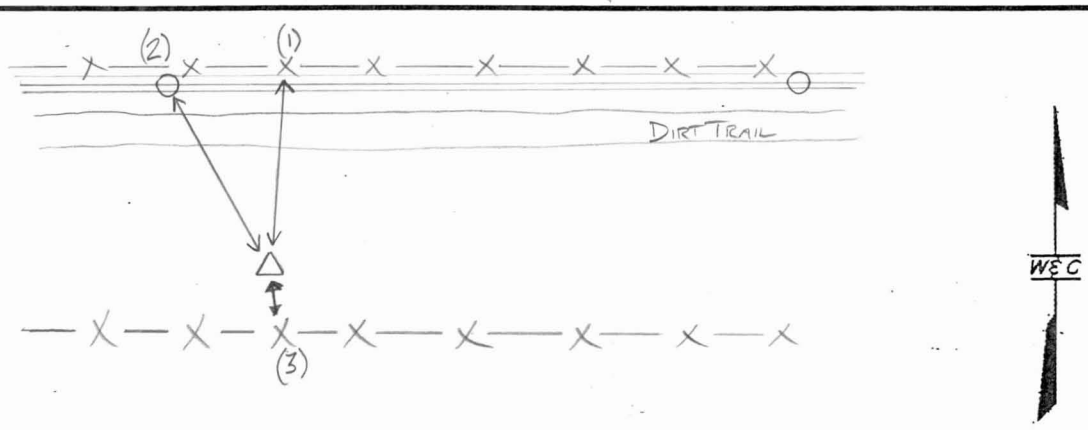
[X] Vertical

Description 5/8" REBAR WITH WCI CAP STAMPED "19"

References

1)	MAG NAIL & FEATHER IN TOP OF FENCE POST	NNE 50 95
2)	MAG NAIL & FEATHER IN SOUTH FACE OF POWER POLE	NW 74 70
3)	MAG NAIL & FEATHER IN EAST FACE OF FENCE POST	SSE 15 90
4)		
5)		
6)	Sta. Offset	

Sketch



Location:

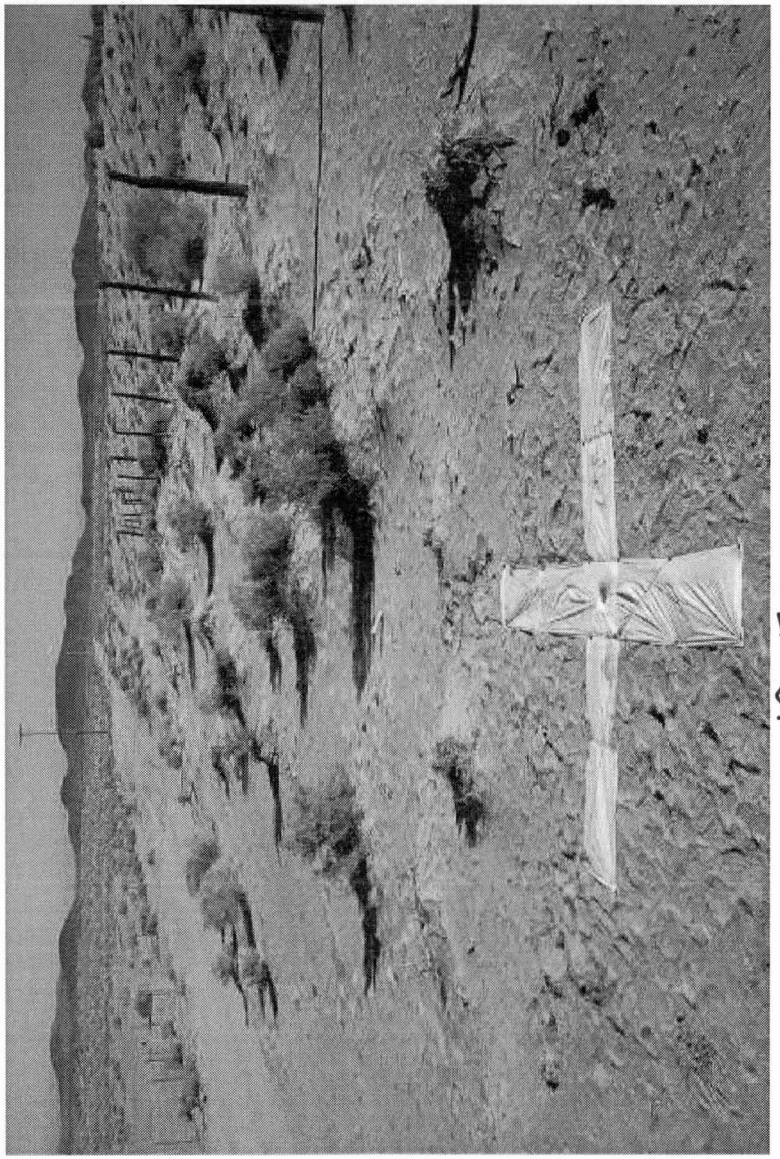
Project No: 0930018608

Date: 12/27/2011

Crew Chief: D. BRANFORT

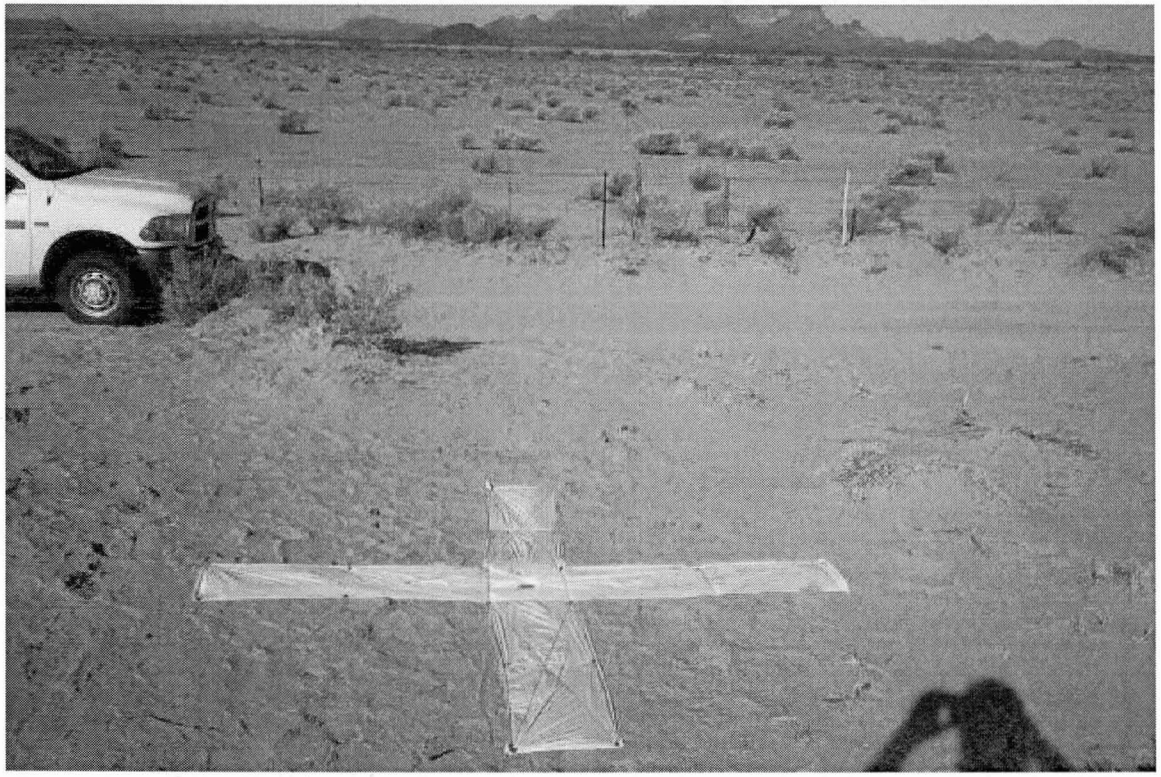
19 Close

19 West



19 East

19 South



19 North

WILSON & COMPANY

SURVEYS & MAPPING

CONTROL REFERENCE SHEET

Point Name: 20

[X] **Horizontal**

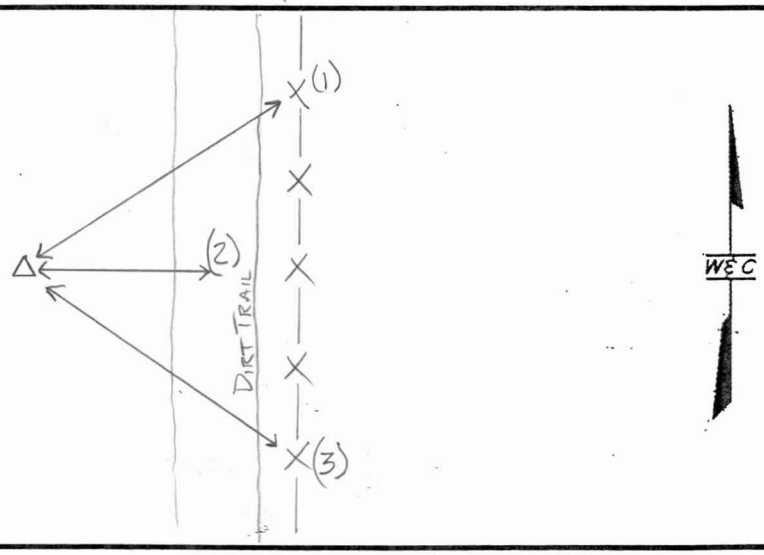
[X] **Vertical**

Description 5/8" REBAR WITH WCI CAP STAMPED "20"

References

1) MAG NAIL & FEATHER IN TOP OF FENCE POST	NE 54.00
2) APPARENT ℄ OF NORTH-SOUTH DIRT TRAIL	E 37.40
3) MAG NAIL & FEATHER IN TOP OF FENCE POST	SE 54.25
4)	
5)	
6) Sta. Offset	

Sketch



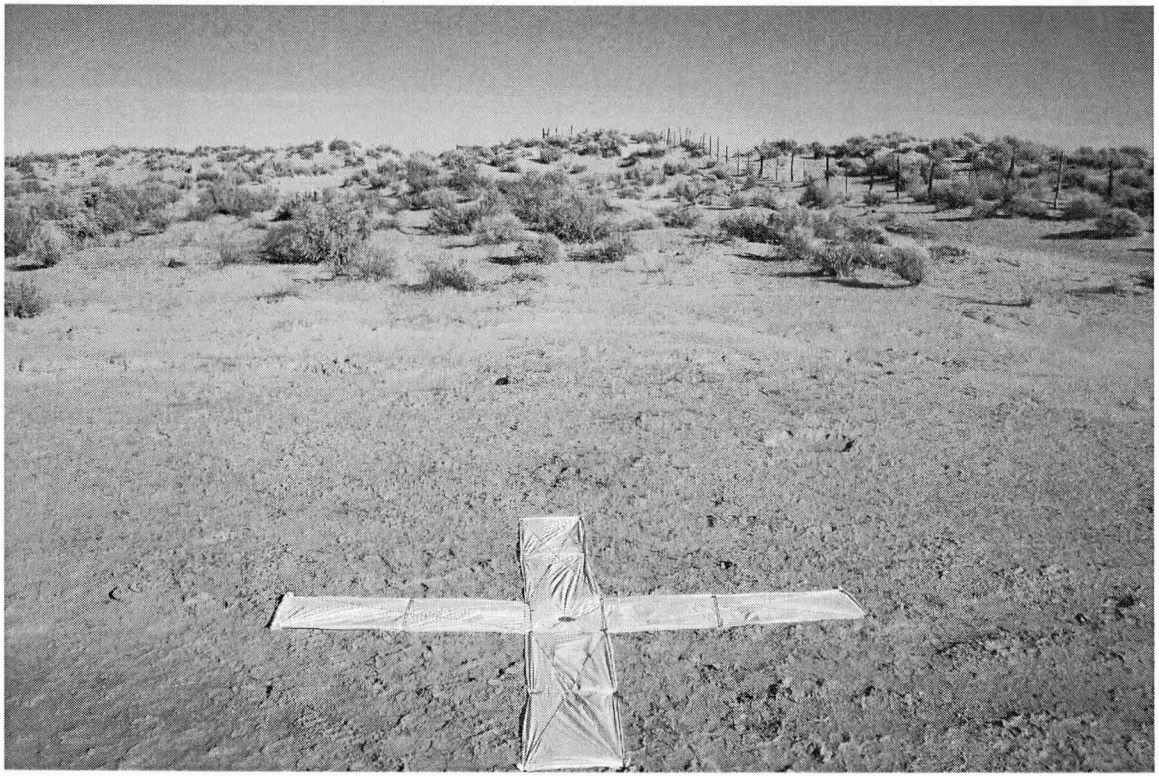
Location:

Project No: 0930018608

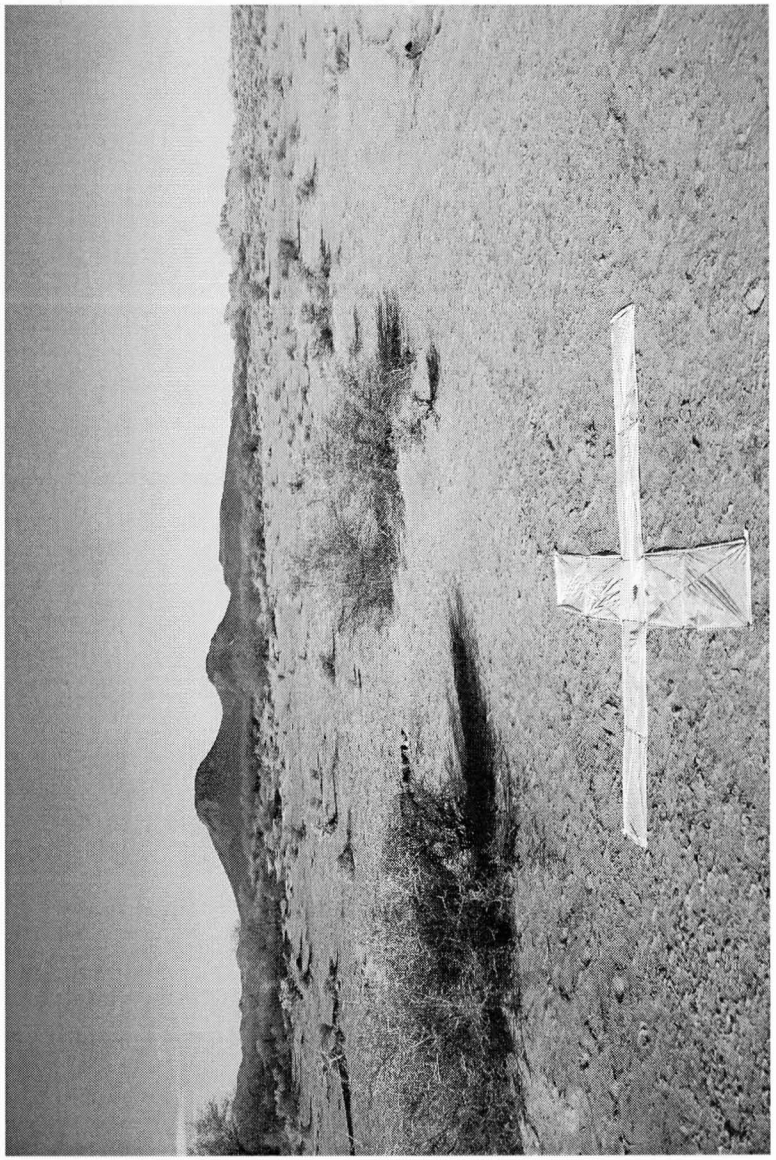
Date: 12/29/2011

Crew Chief: D. BRANFORT

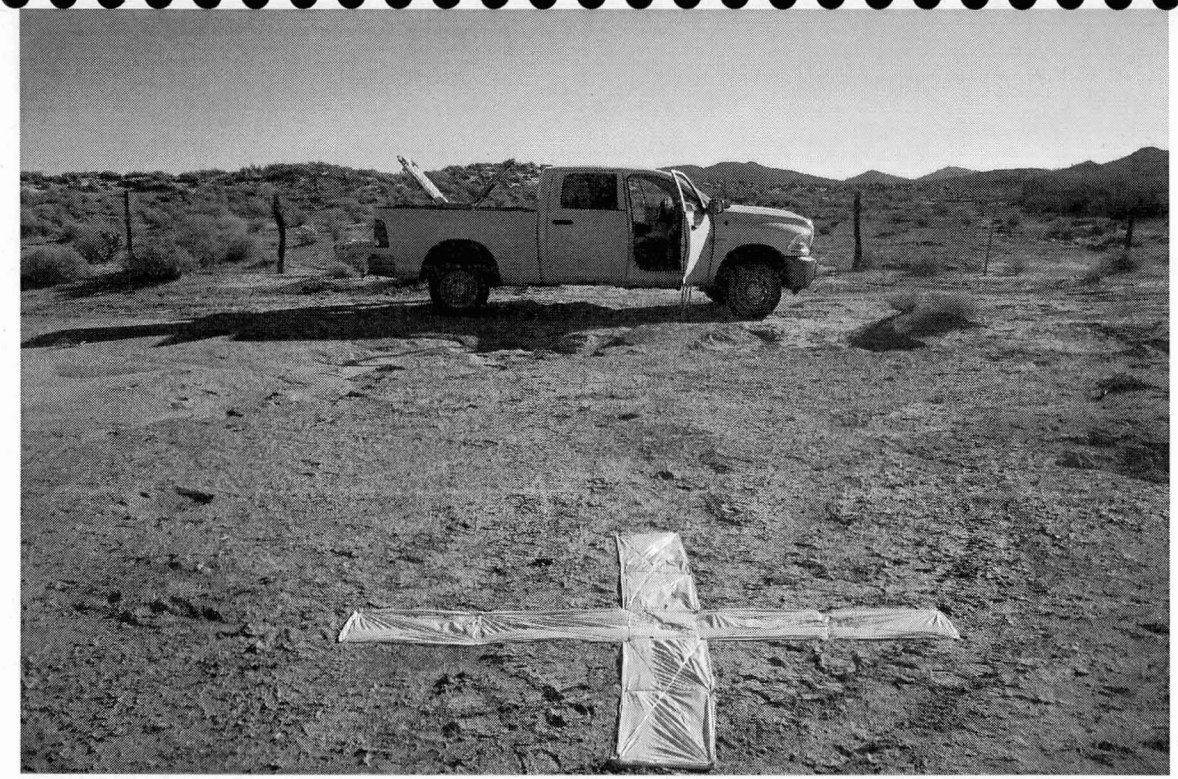
20 South



20 North



20 West



20 East

20 Close

WILSON & COMPANY

SURVEYS & MAPPING

CONTROL REFERENCE SHEET

Point Name: 22

[X] Horizontal

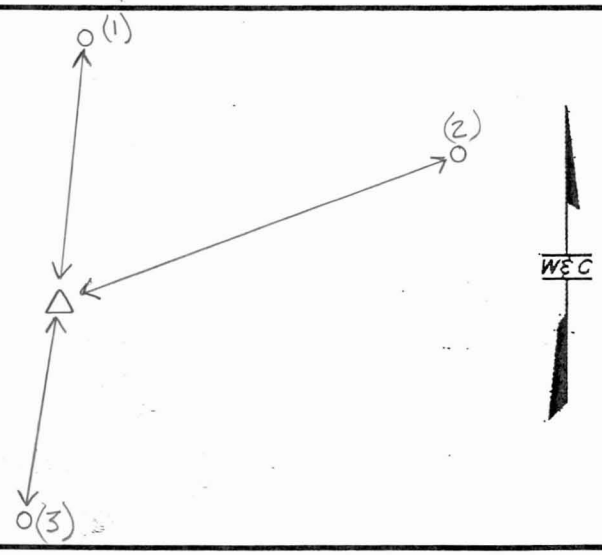
[X] Vertical

Description 1/2" REBAR WITH TAG MARKED "22 WCI" WIRED TO IT

References

1)	7" DIAMETER SAGUARO CACTUS	NNE 270 30
2)	12" DIAMETER SAGUARO CACTUS	NE 279 30
3)	11" DIAMETER SAGUARO CACTUS	SSW 143 00
4)		
5)		
6)	Sta. Offset	

Sketch

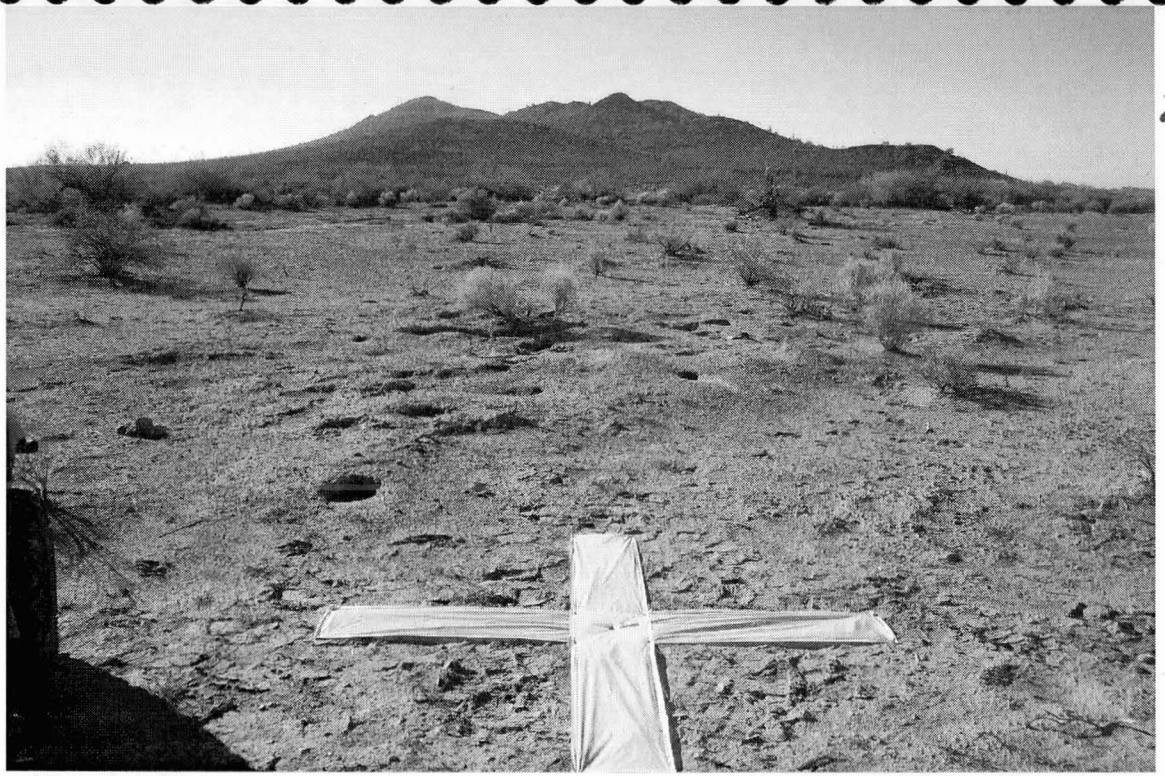


Location:

Project No: 0930018608

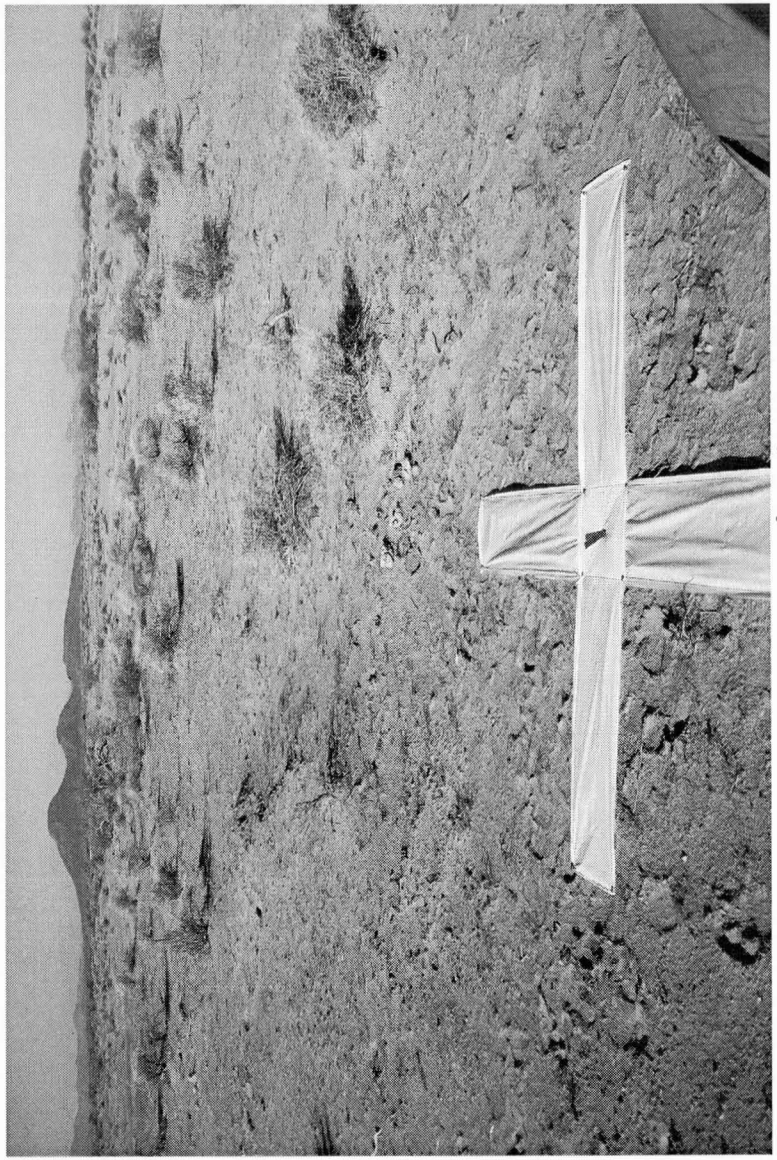
Date: 12/29/2011

Crew Chief: D. BRANFORT

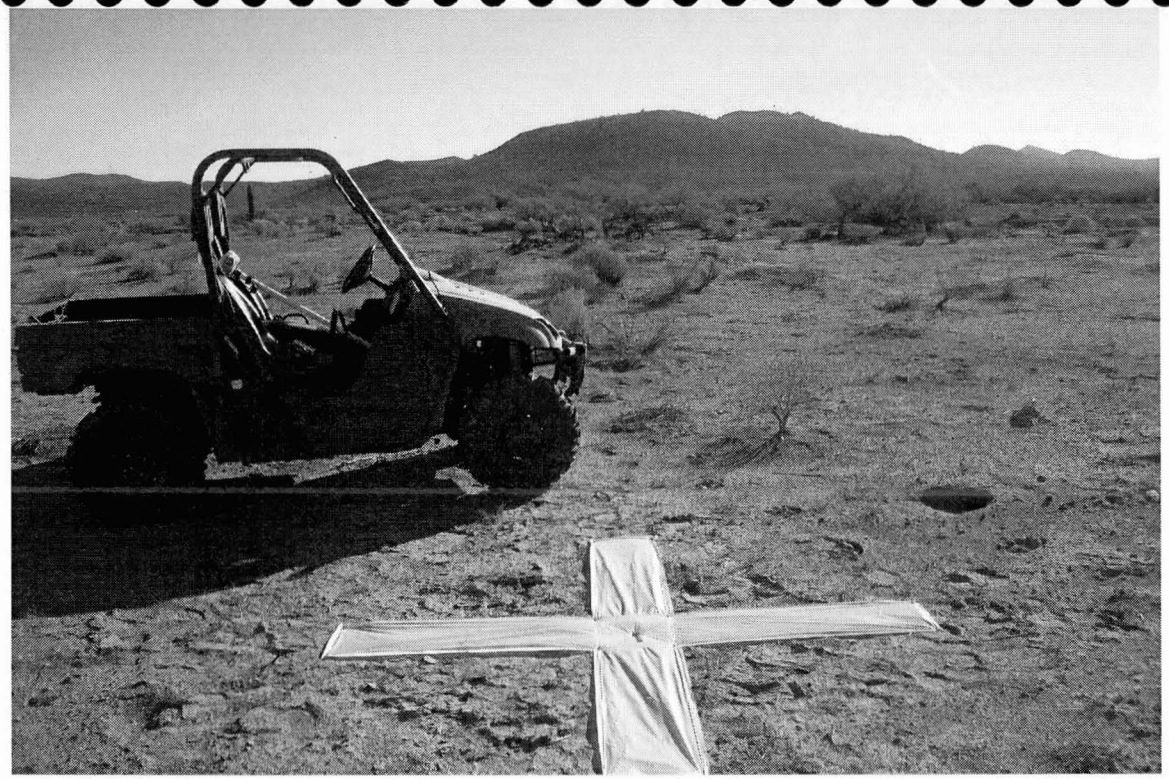


22 South

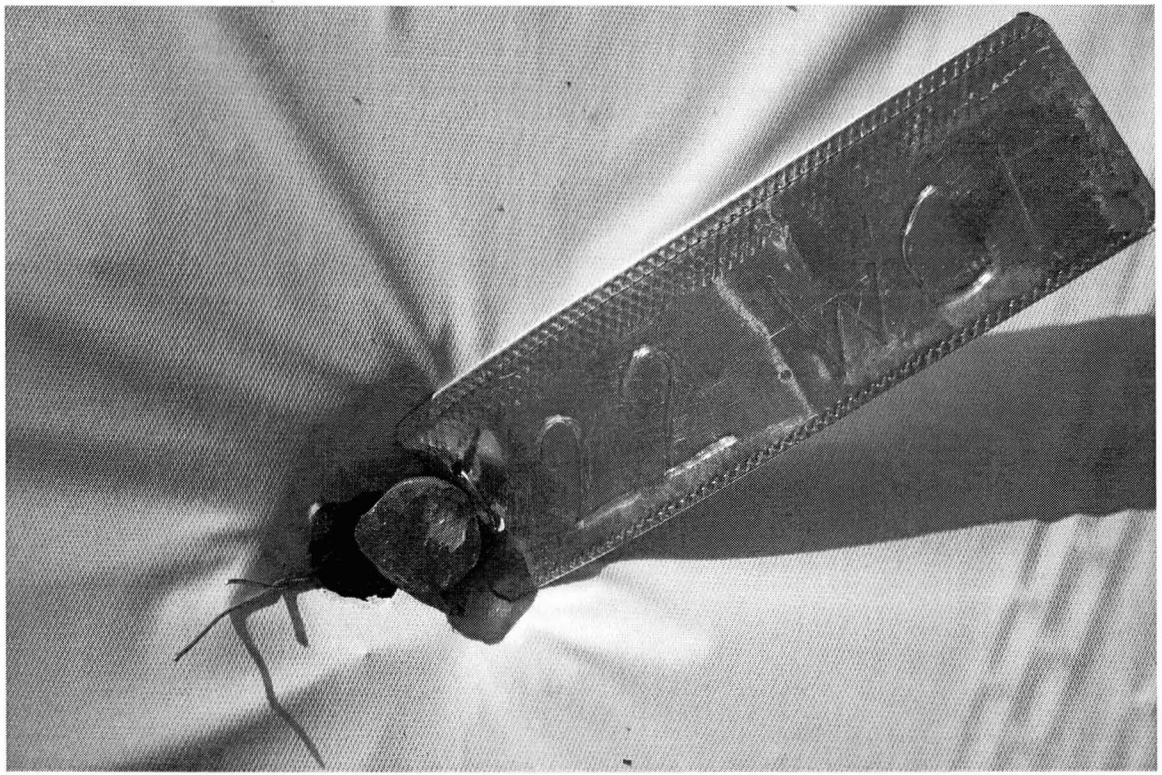
22 North



22 West



22 East



22 Close

WILSON & COMPANY

SURVEYS & MAPPING

CONTROL REFERENCE SHEET

Point Name: 24

☒ **Horizontal**

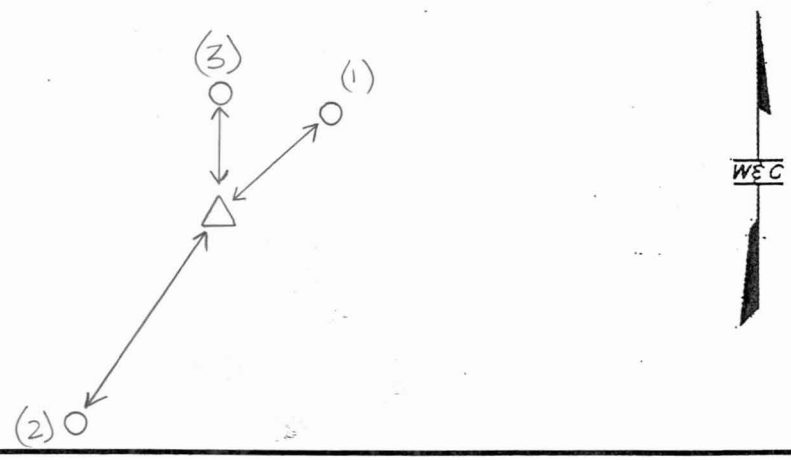
☒ **Vertical**

Description 1/2" REBAR WITH TAG MARKED "24 WCI" WIRED TO IT

References

1) 8" DIAMETER PALO VERDE TREE		NE 30 40
2) 14" DIAMETER SAGUARO CACTUS WITH 5 ARMS		SW 81 40
3) 12" DIAMETER PALO VERDE TREE		N 30 20
4)		
5)		
6) Sta.	Offset	

Sketch

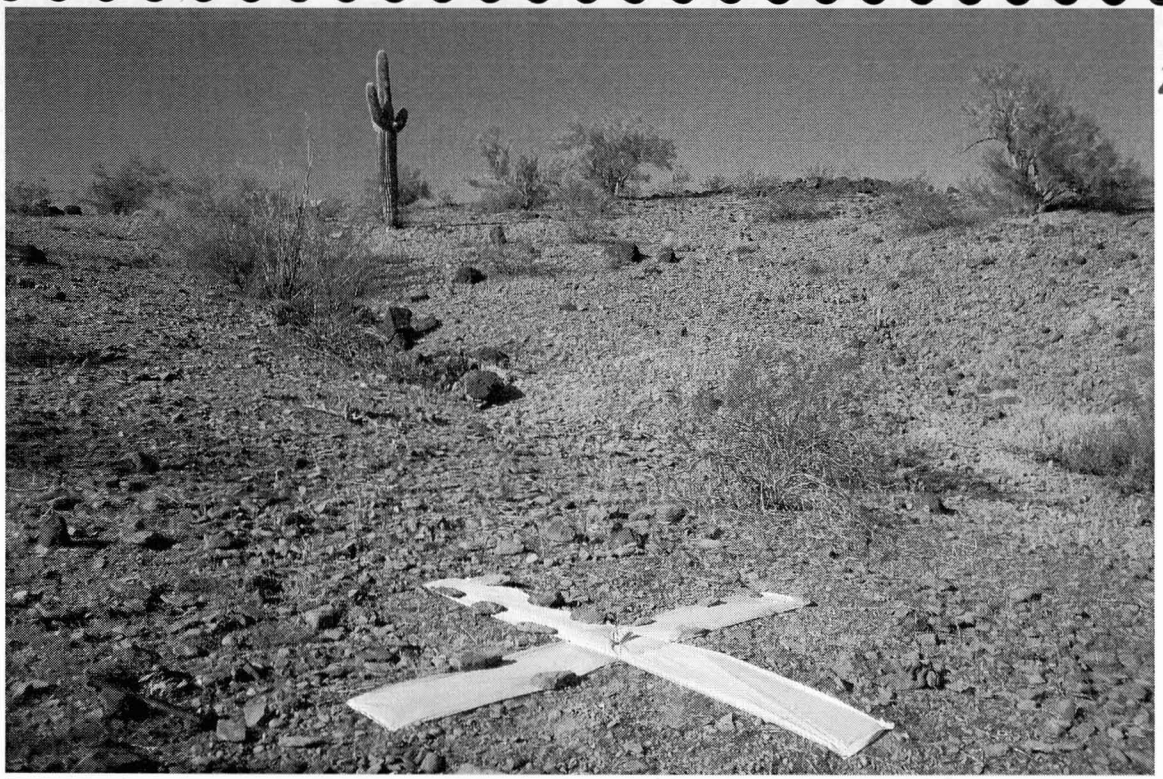


Location:

Project No: 0930018608

Date: 12/30/2011

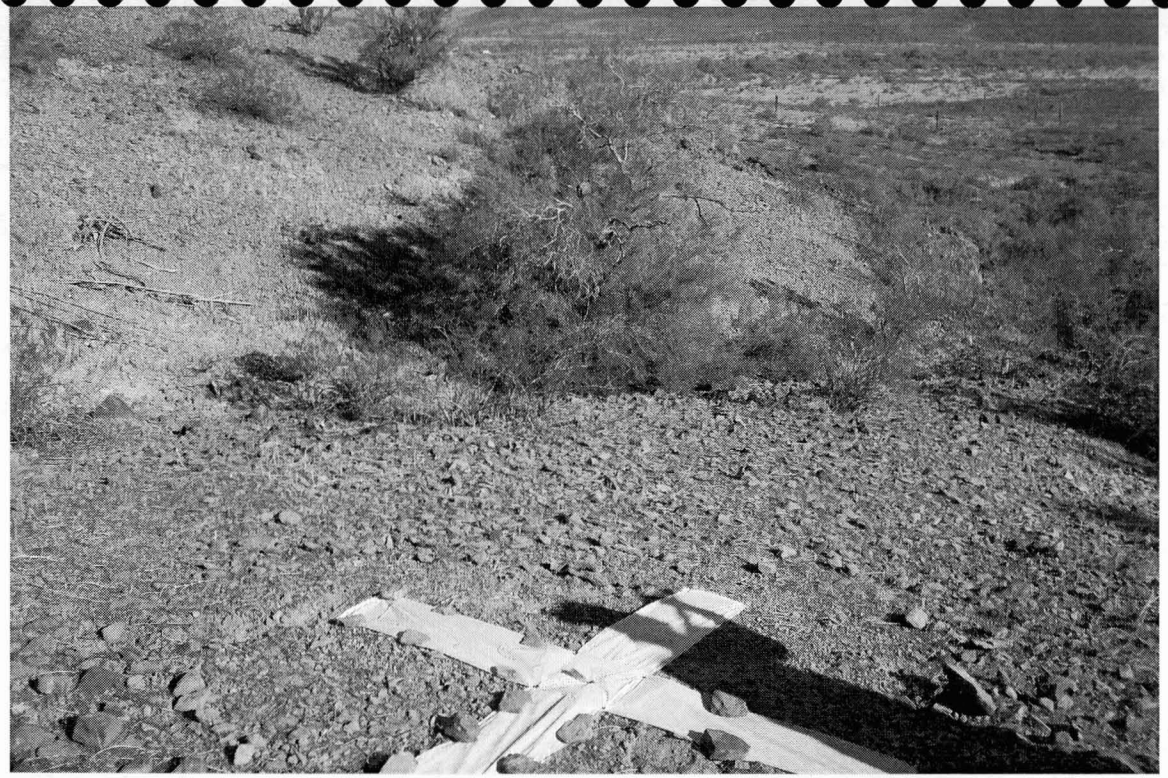
Crew Chief: D. BRANFORT



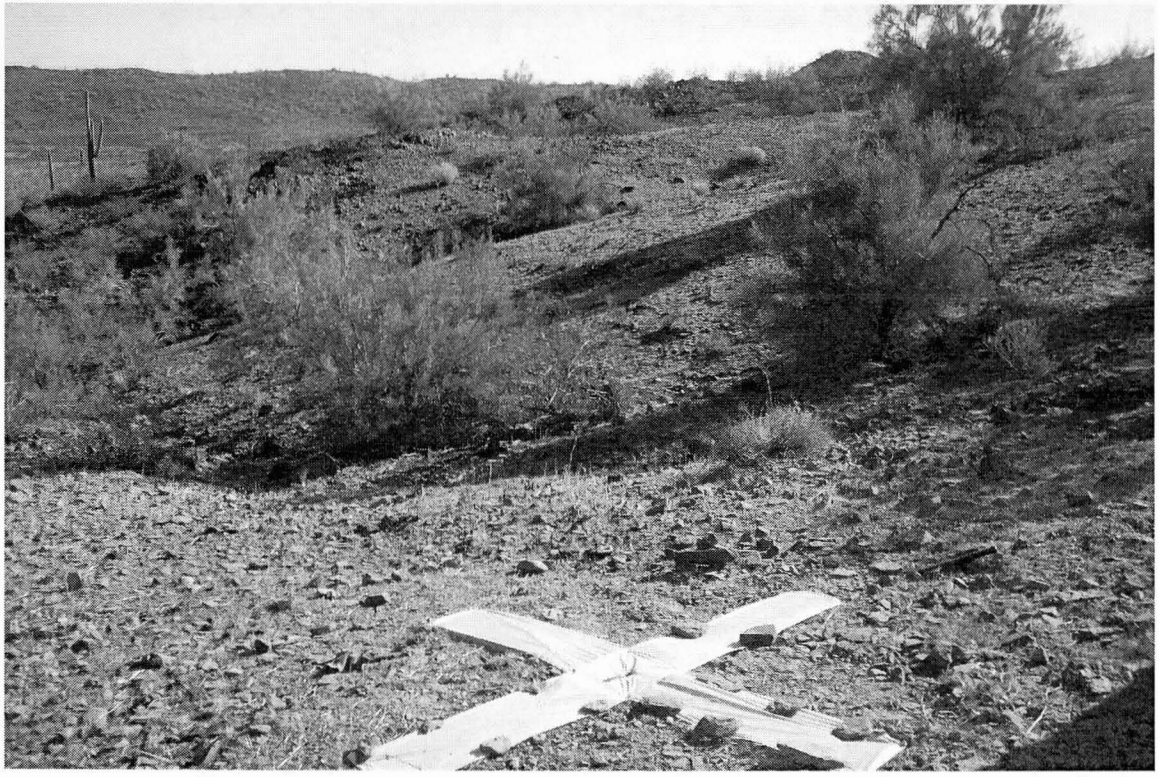
24 West

24 South

24 Close



24 North



24 East

WILSON & COMPANY

SURVEYS & MAPPING

CONTROL REFERENCE SHEET

Point Name: 26

☒ Horizontal

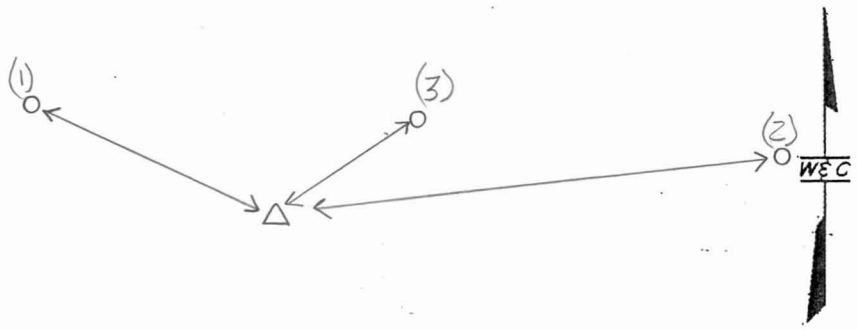
☒ Vertical

Description 1/2" REBAR WITH TAG MARKED "26 WCI" WIRED TO IT

References

1) 14" DIAMETER SAGUARO CACTUS	NW 343.70
2) 24" DIAMETER SAGUARO CACTUS WITH 8 ARMS	ENE 704.25
3) MAG NAIL & FEATHER IN SOUTH FACE OF PALO VERDE TREE	NE 108.00
4)	
5)	
6) Sta. Offset	

Sketch

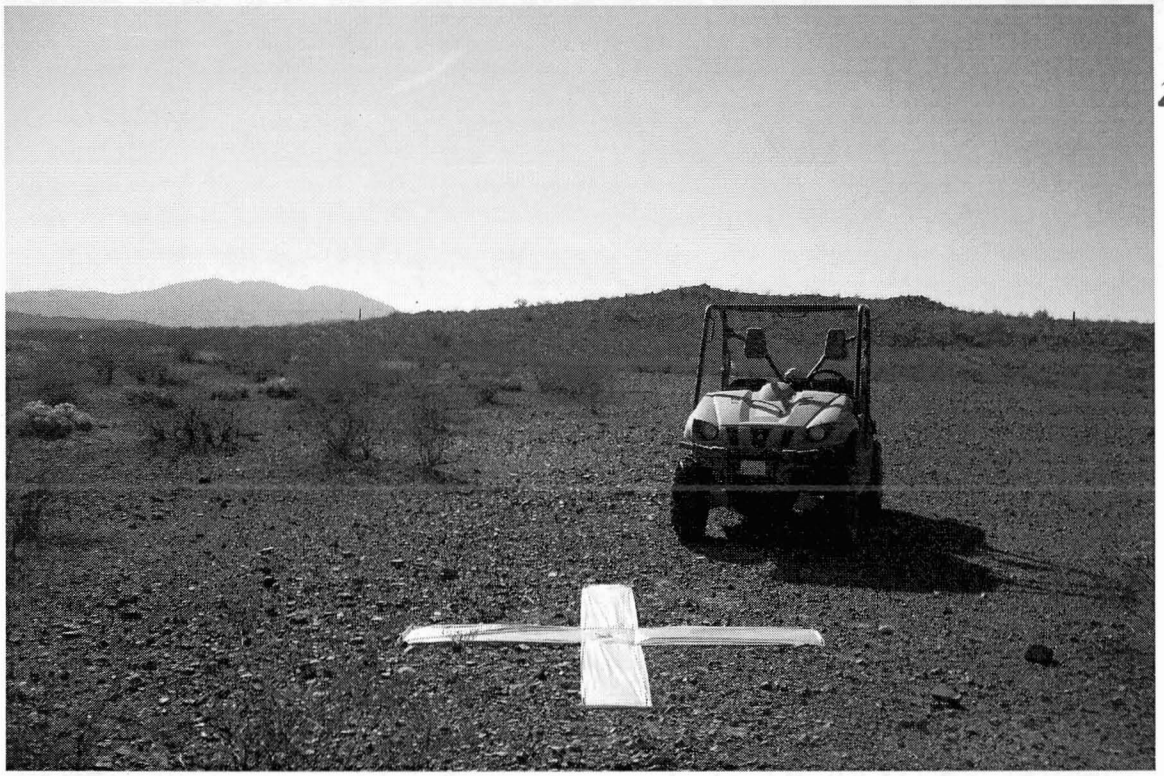


Location:

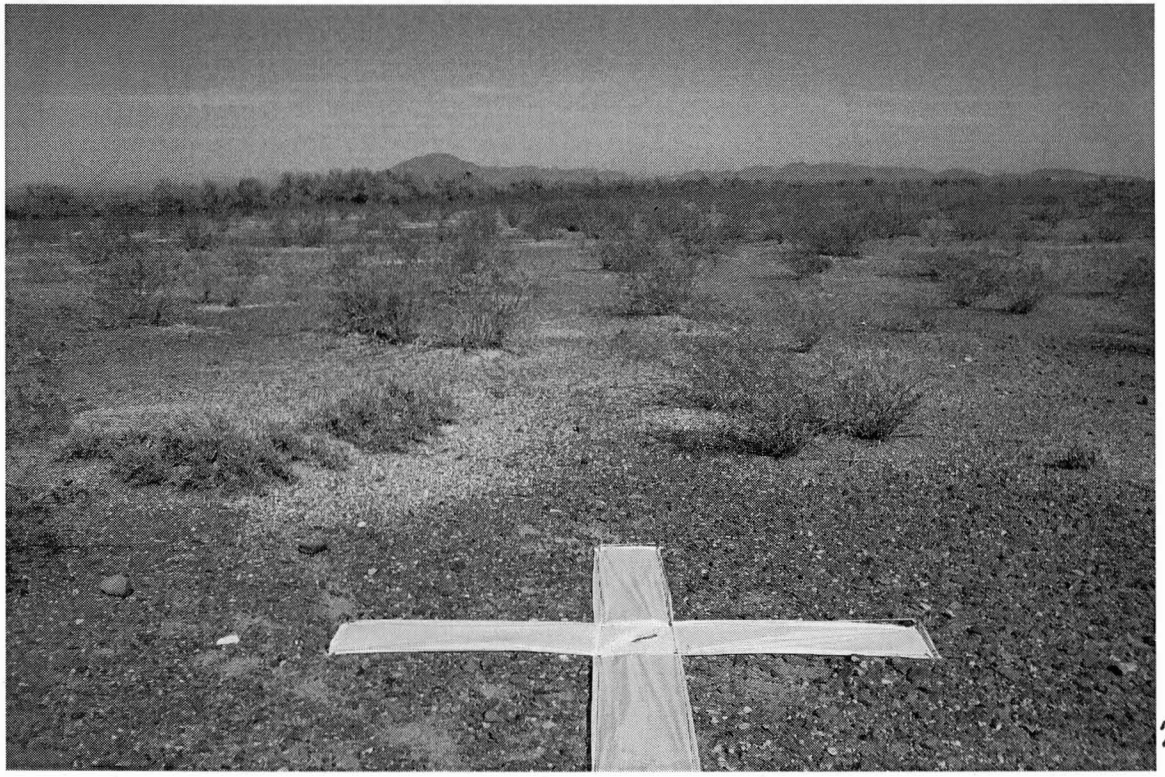
Project No: 0930018608

Date: 12/30/2011

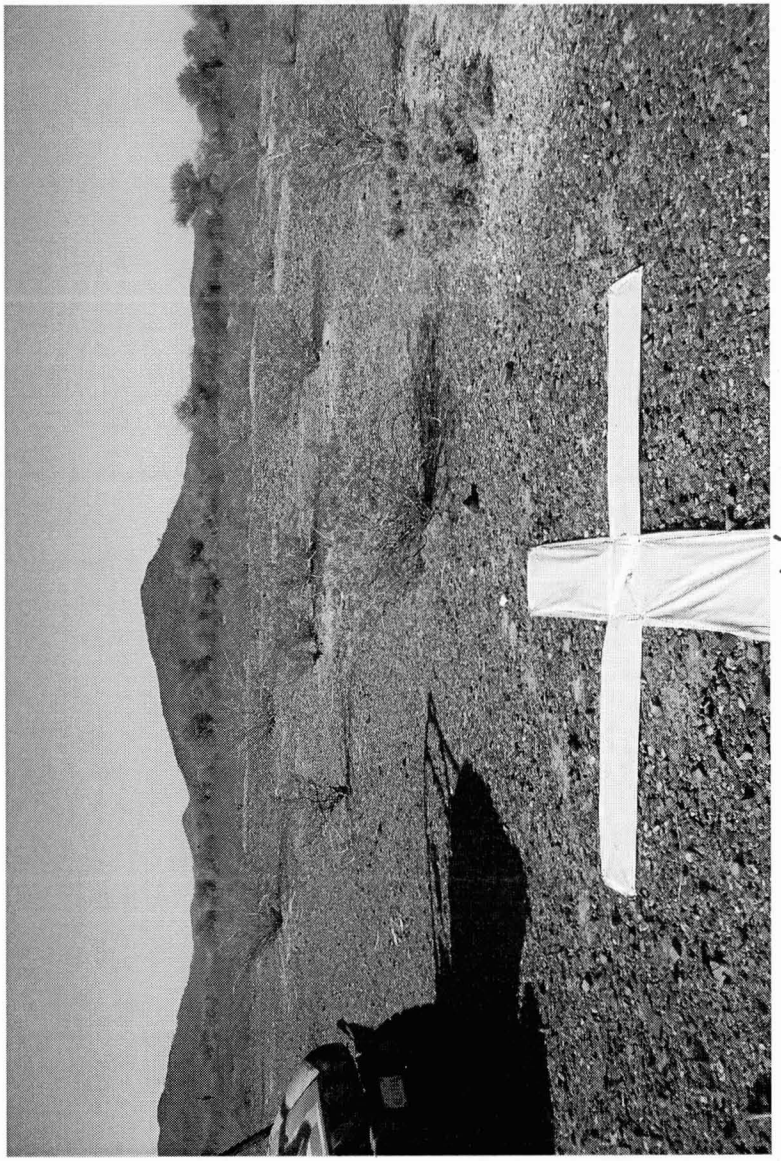
Crew Chief: D. BRANFORT



26 South

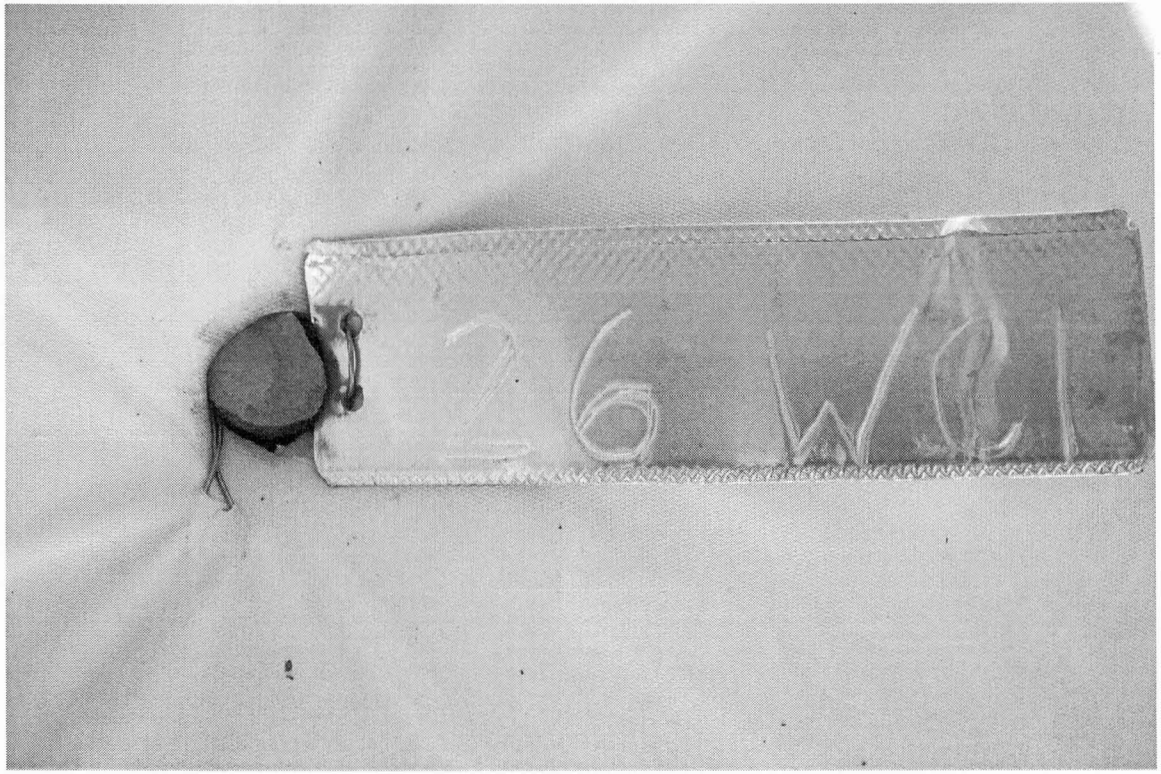


26 North



26 West

26 East



26 Close

WILSON & COMPANY

SURVEYS & MAPPING

CONTROL REFERENCE SHEET

Point Name: 27

☒ **Horizontal**

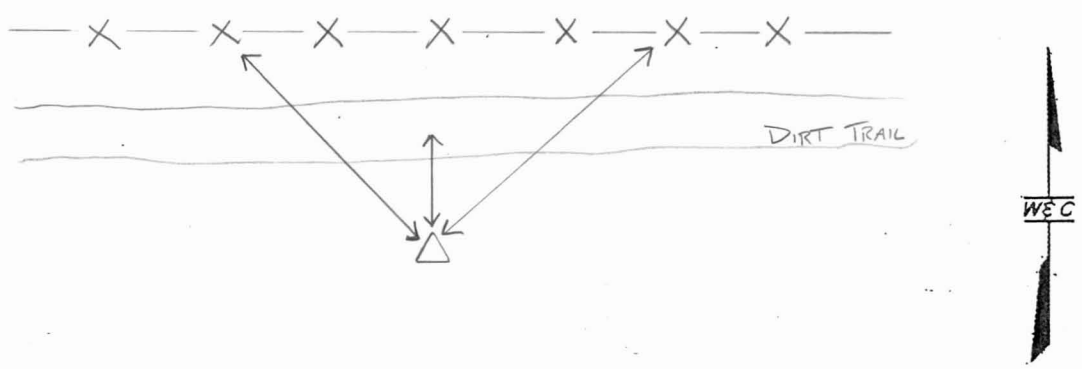
☒ **Vertical**

Description 5/8" REBAR WITH WCI CAP STAMPED "27"

References

1) FENCE POST WITH PINK FLAGGING	NW 80 67
2) APPARENT ℄ OF DIRT TRAIL	N 34 65
3) FENCE POST WITH PINK FLAGGING	NE 82 20
4)	
5)	
6) Sta. Offset	

Sketch

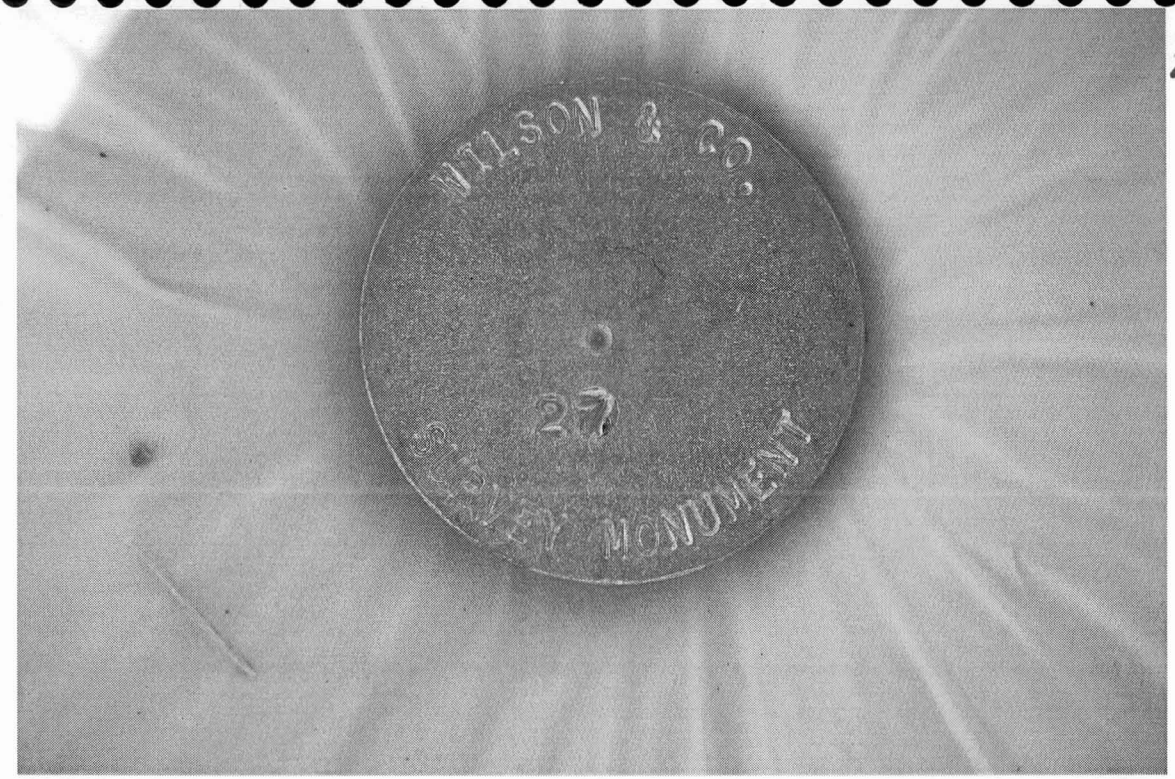


Location:

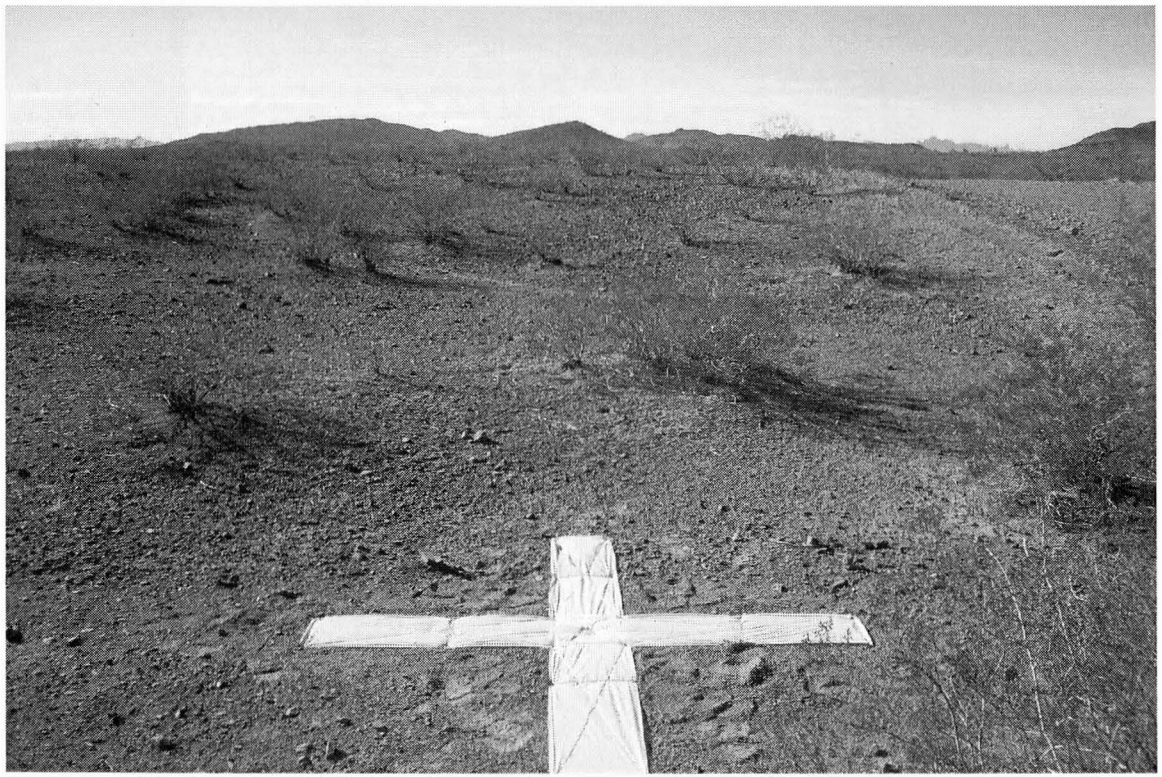
Project No: 0930018608

Date: 12/29/2011

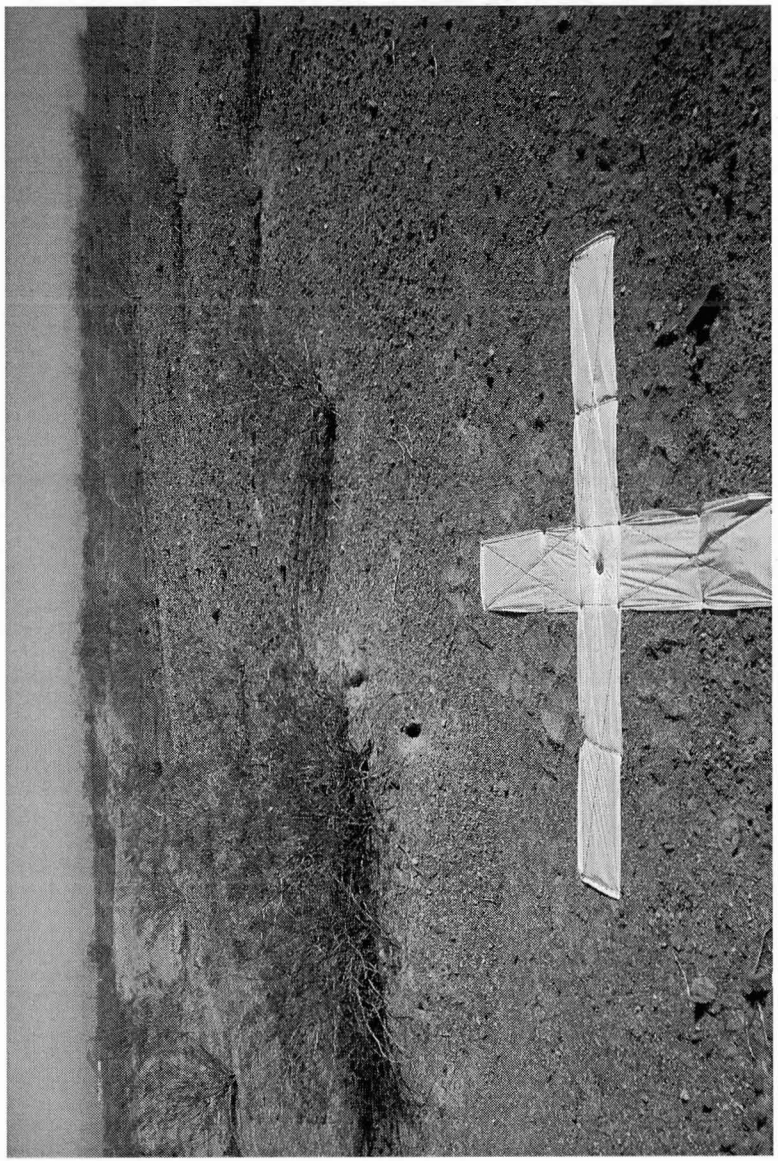
Crew Chief: D. BRANFORT



27 Close

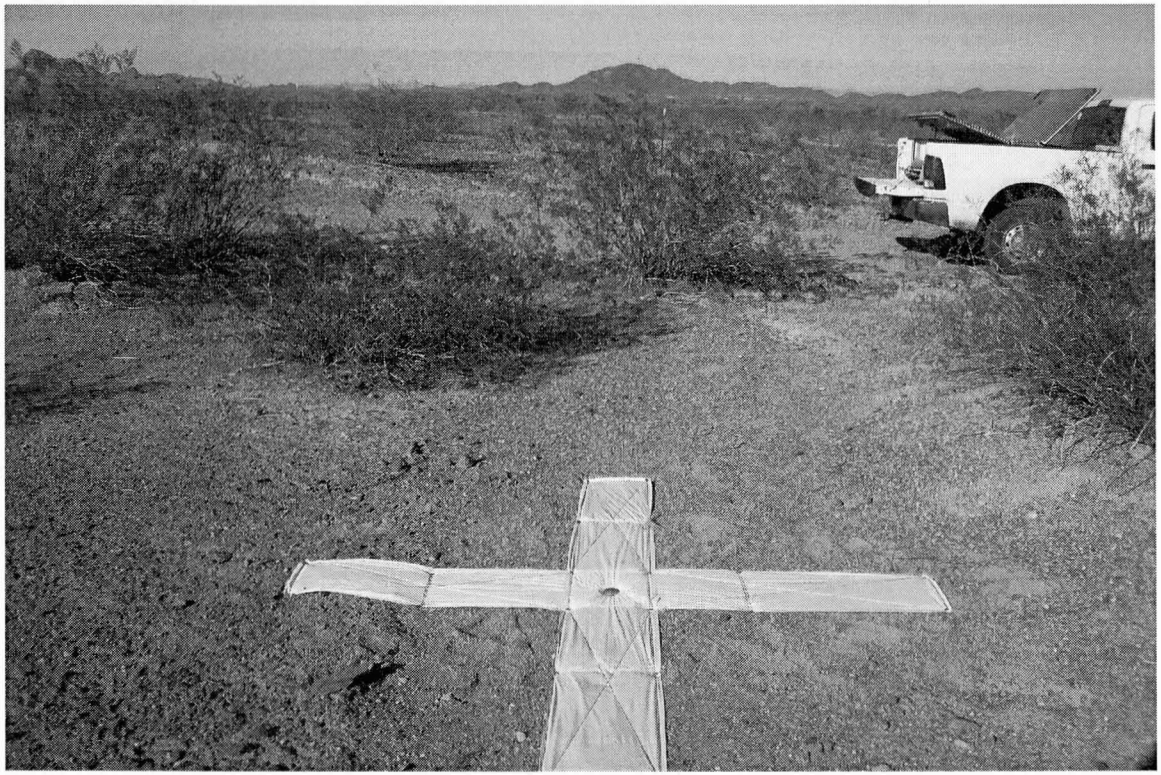


27 West



27 East

27 South



27 North

WILSON & COMPANY

SURVEYS & MAPPING

CONTROL REFERENCE SHEET

Point Name: 28

☒ **Horizontal**

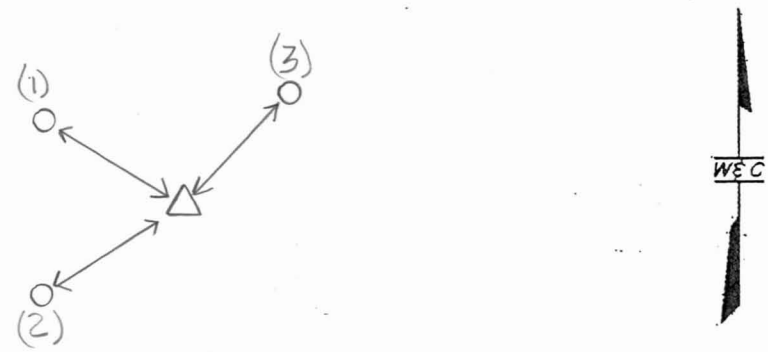
☒ **Vertical**

Description 1/2" REBAR WITH TAG MARKED "28 WCI" WIRED TO IT

References

1) 1' DIAMETER CREOSOTE BUSH WITH PINK FLAGGING	NW 18.80
2) 2' DIAMETER CREOSOTE BUSH WITH PINK FLAGGING	SW 18.00
3) 1' DIAMETER CREOSOTE BUSH WITH PINK FLAGGING	NE 20.70
4)	
5)	
6) Sta. Offset	

Sketch

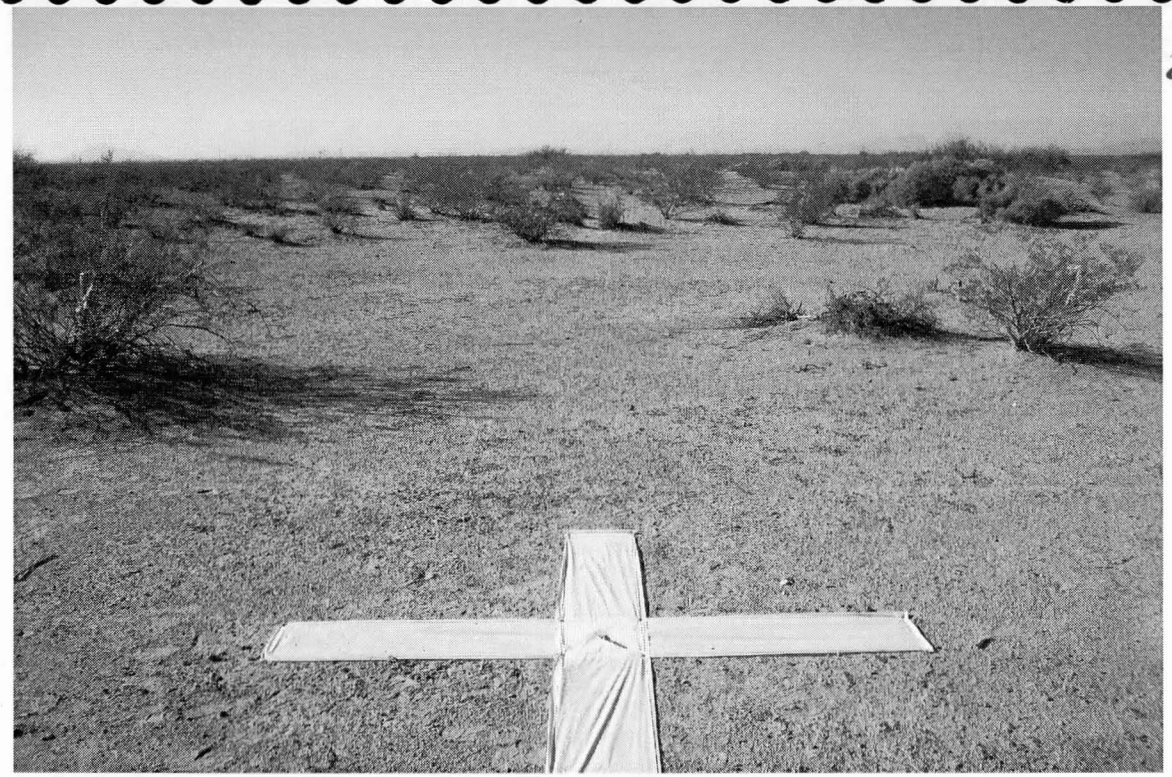


Location:

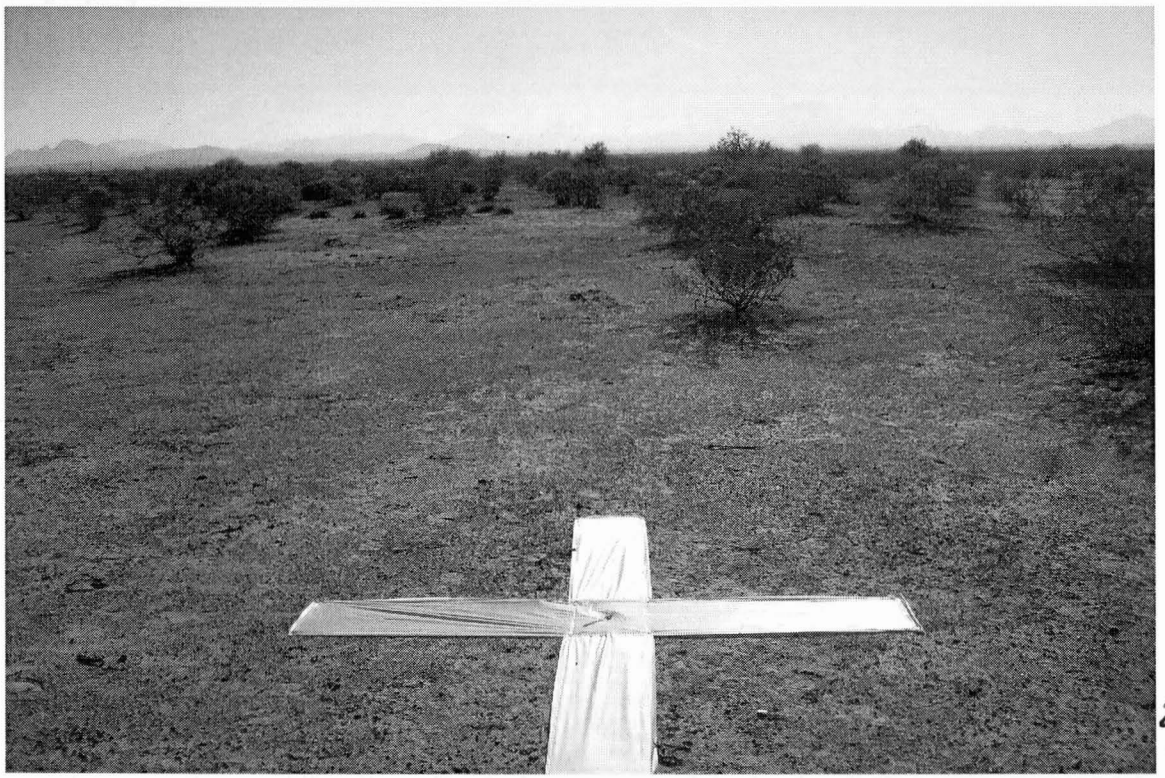
Project No: 0930018608

Date: 12/30/2011

Crew Chief: D. BRANFORT



28 West



28 South

28 Close

28 North

28 East

WILSON & COMPANY

SURVEYS & MAPPING

CONTROL REFERENCE SHEET

Point Name: 30

[X] **Horizontal**

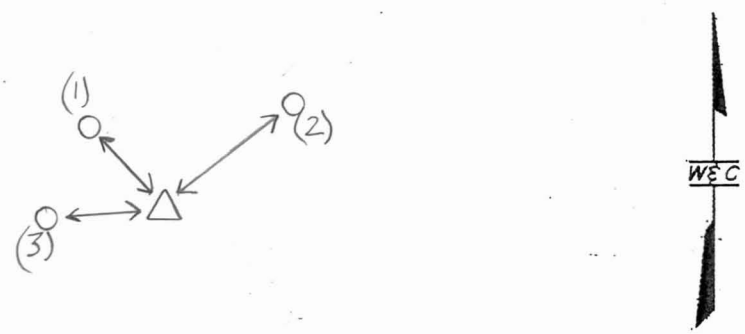
[X] **Vertical**

Description 1/2" REBAR WITH TAG MARKED "30 WCI" WIRED TO IT

References

1)	1.5' DIAMETER CREOSOTE BUSH WITH PINK FLAGGING	NW 20 10
2)	2' DIAMETER CREOSOTE BUSH WITH PINK FLAGGING	NE 22 30
3)	1' DIAMETER CREOSOTE BUSH WITH PINK FLAGGING	WSW 20 20
4)		
5)		
6)	Sta. Offset	

Sketch



Location:

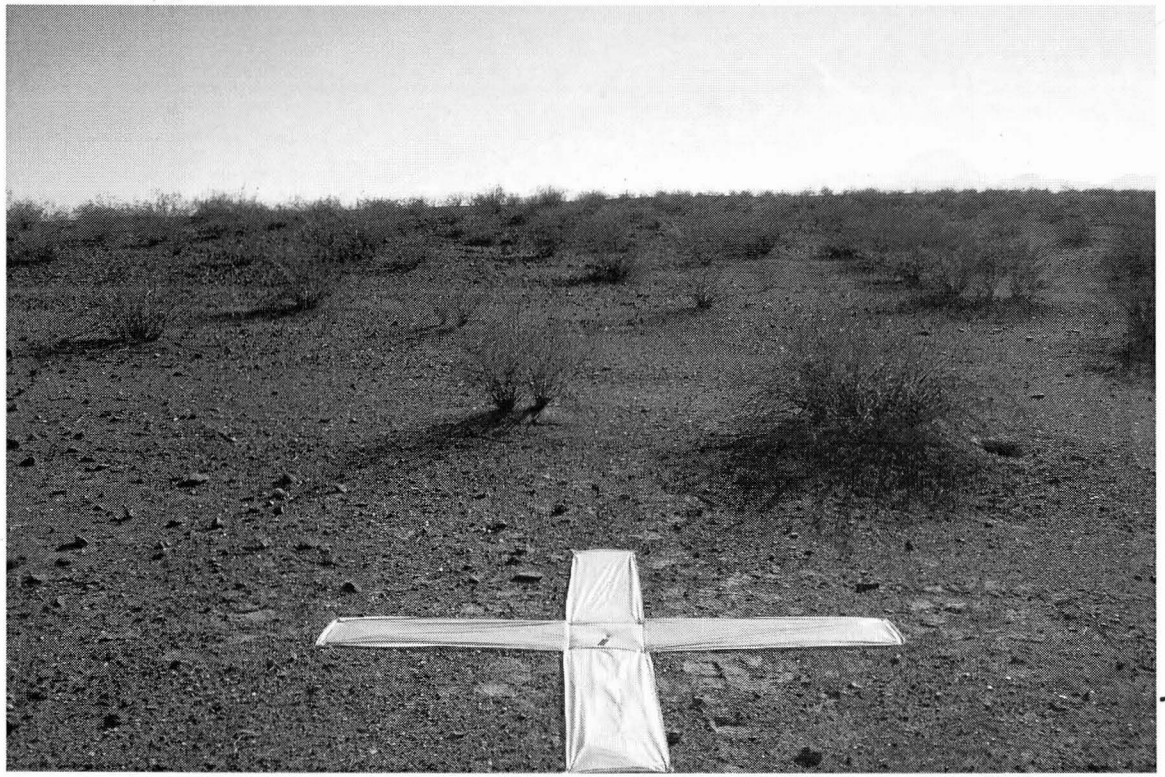
Project No: 0930018608

Date: 12/30/2011

Crew Chief: D. BRANFORT

30 west

30 Close



30 South

30 North

30 East

WILSON & COMPANY

SURVEYS & MAPPING

CONTROL REFERENCE SHEET

Point Name: 32

[X] **Horizontal**

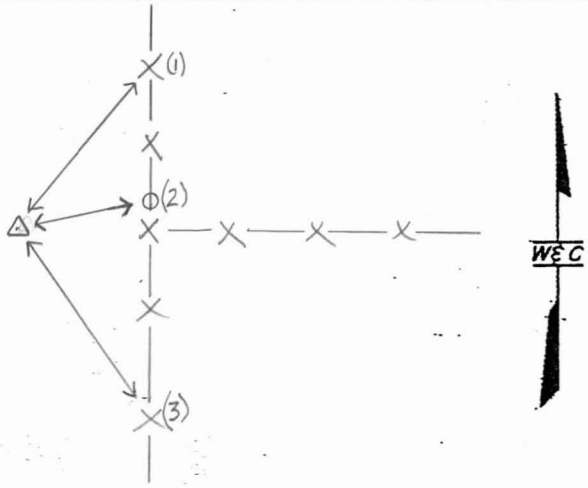
[X] **Vertical**

Description 1/2" REBAR WITH TAG MARKED "32 WC1" WIRED TO IT

References

1) MAG NAIL & FEATHER IN TOP OF FENCE POST		NE 24 50
2) 3 1/2" BRASS CAP (BLM) / W 1/4 SEC 12		ENE 14 00
3) MAG NAIL & FEATHER IN TOP OF FENCE POST		SE 24 60
4)		
5)		
6) Sta.	Offset	

Sketch



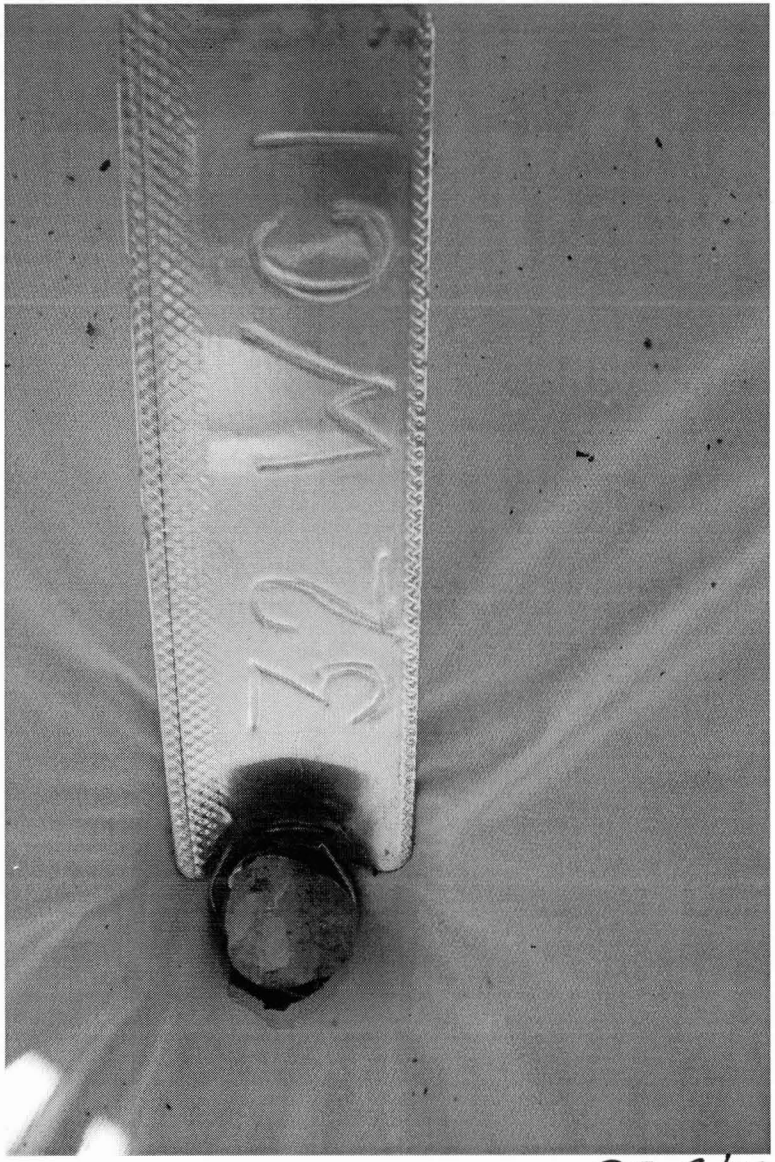
Location:

Project No: 0930018608

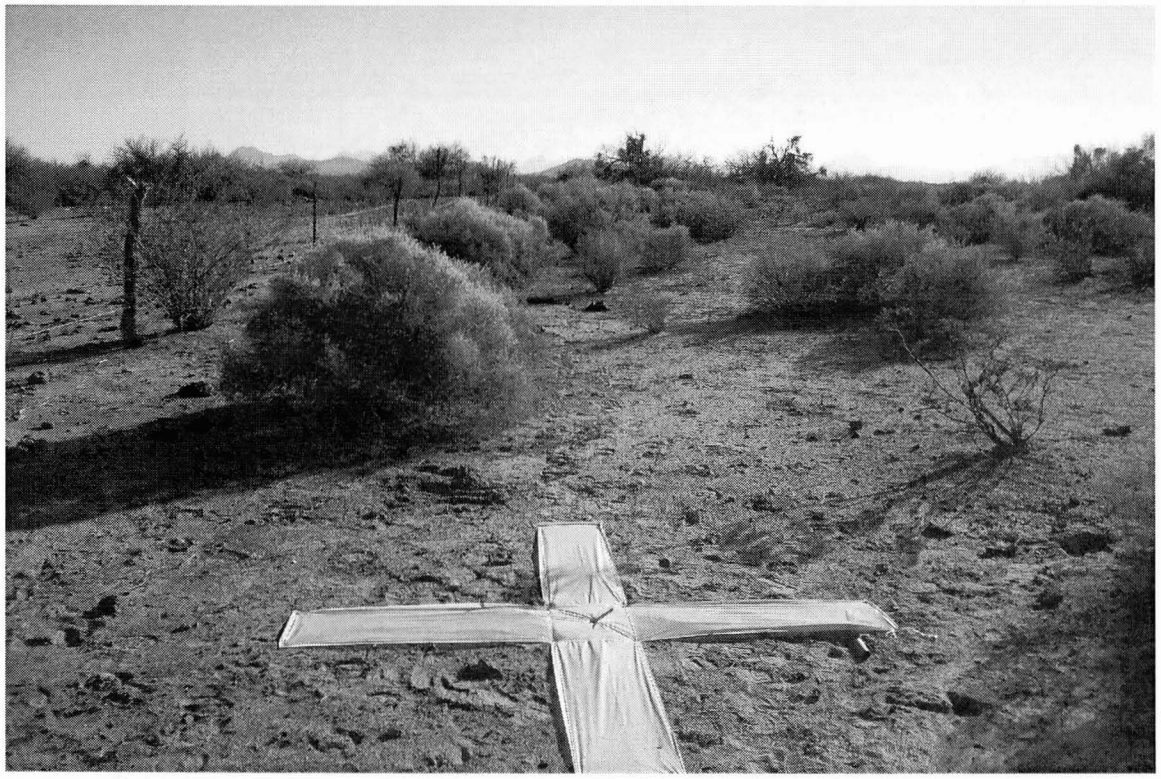
Date: 12/30/2011

Crew Chief: D. BRANFORT

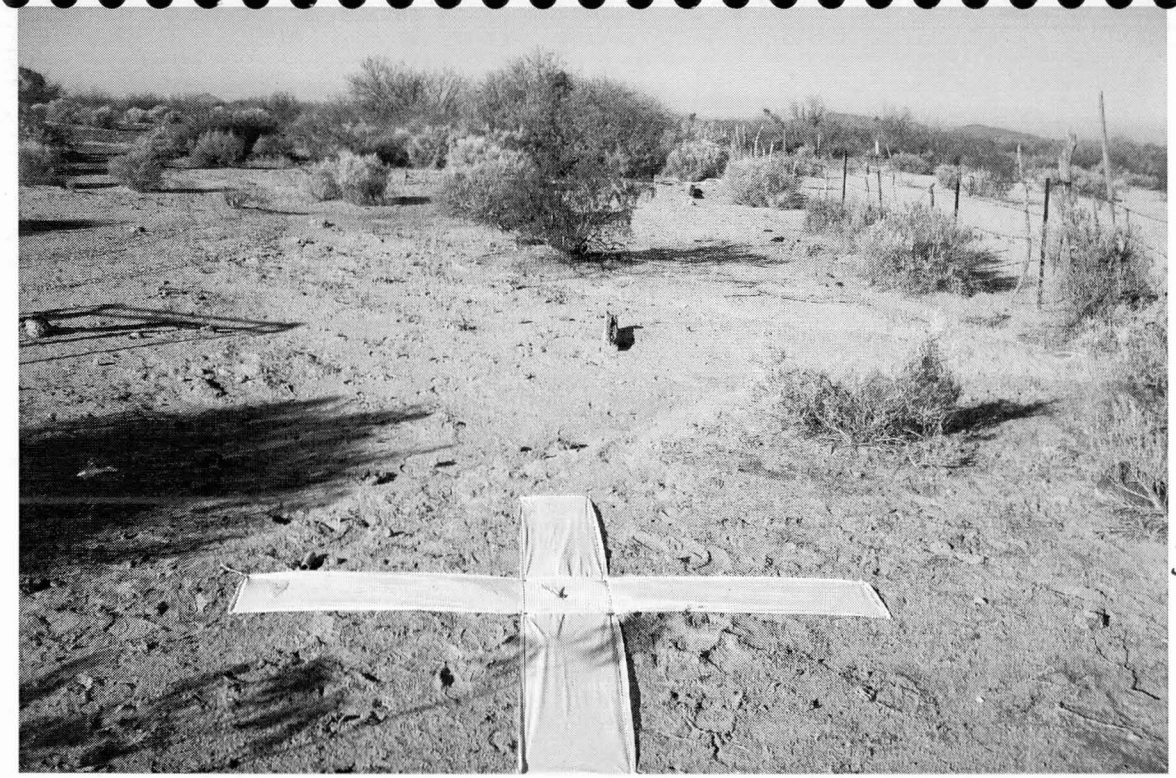
32 West



32 Close



32 South



32 North

32 East

WILSON & COMPANY

SURVEYS & MAPPING

CONTROL REFERENCE SHEET

Point Name: 33

[X] **Horizontal**

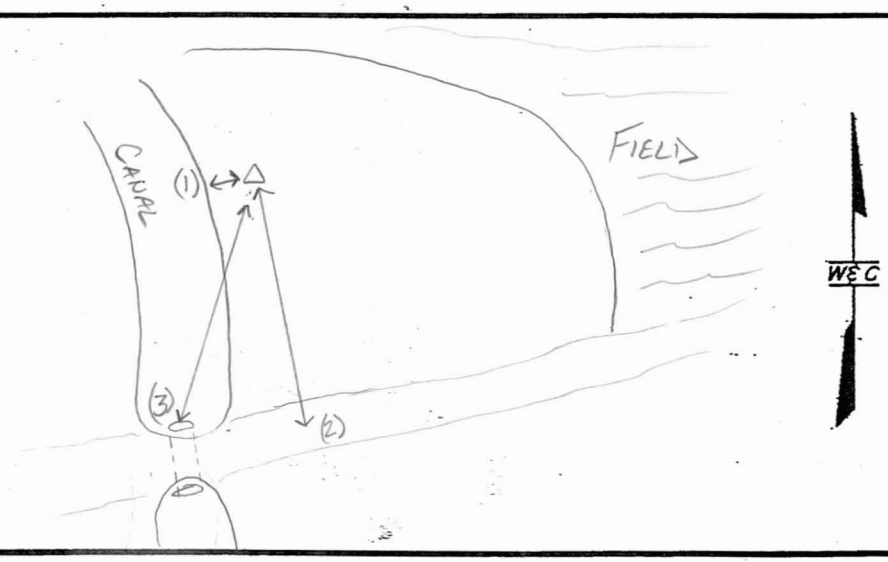
[X] **Vertical**

Description 1/2" REBAR WITH TAG MARKED "33 WC1" WIRED TO IT

References

1) EAST EDGE OF IRRIGATION CANAL	WSW 14.5
2) APPARENT ℄ OF DIRT RD	SE 119.3
3) TOP OF NORTH END OF 24" DIA CORRUGATED PLASTIC PIPE	SSW 113.15
4)	
5)	
6) Sta. Offset	

Sketch



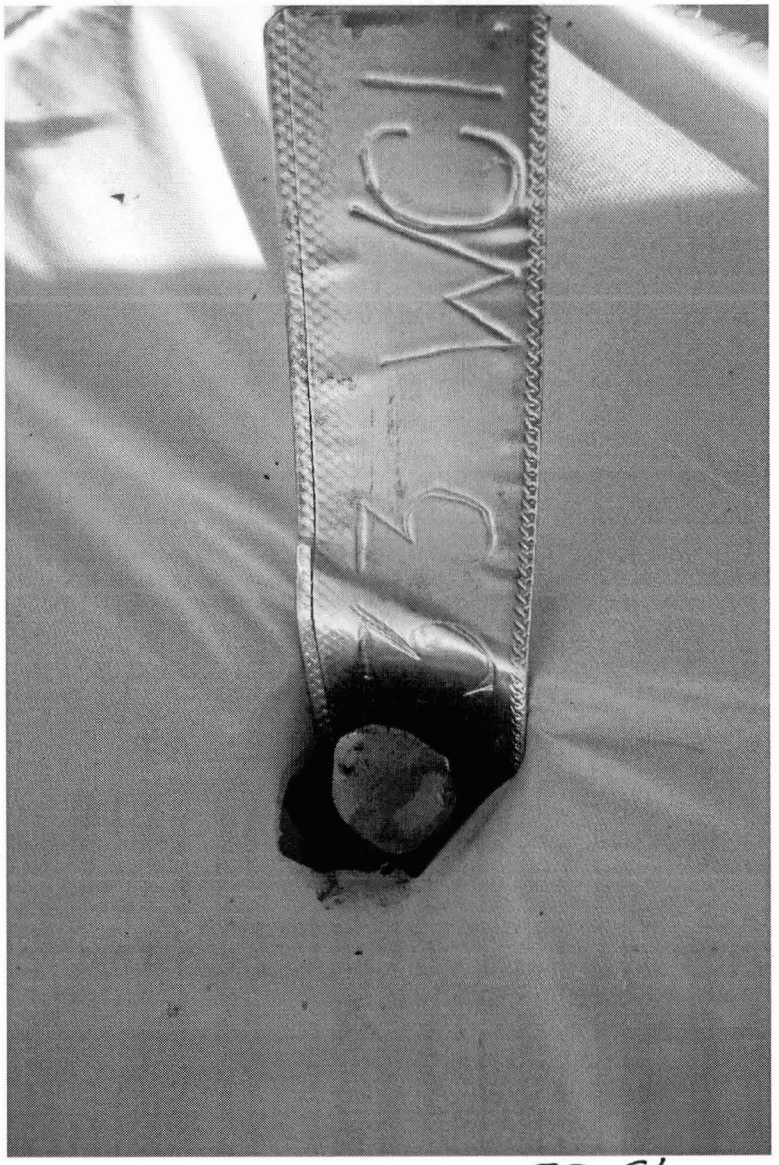
Location:

Project No: 0930018608

Date: 12/30/2011

Crew Chief: D. BRANFORT

33 West



33 Close

33 South

33 North

33 East