

Survey Report

Job name	BoCo Lidar
Creation date	22 Apr 2015
Version	Trimble General Survey 2.60
Distance Units	US survey feet
Angle units	Degrees
Pressure Units	inHg
Temperature Units	Fahrenheit

Coordinate system (Job)

System	US State Plane 1983
Zone	Missouri Central 2402
Datum	NAD 1983 (Conus)

Projection

Projection	Transverse Mercator
Origin lat	35°50'00.00000"N
Origin long	92°30'00.00000"W
False northing	0.000
False easting	1640416.667
Scale	0.99993333
South azimuth (grid)	No
Grid coords	Increase North-East
Ellipsoid	Semi-major axis: 20925604.474 Flattening: 298.25722154

Local site

Type	Grid
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Datum transformation

Type	Three parameter
Semi-major axis	20925604.474
Flattening	298.257223
Translation X	0.000
Translation Y	0.000
Translation Z	0.000

Vertical adjustment

Geoid file	G12AUS
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Collected Field Data (ECEF deltas: APC to APC)

Corrections

South azimuth (grid)	No
Grid coords	Increase North-East
Magnetic declination	0°00'00"
Distances	Ground
Neighborhood adjustment	Off

Projection

Projection	Transverse Mercator
Origin lat	35°50'00.00000"N
Origin long	92°30'00.00000"W
False northing	0.000
False easting	1640416.667
Scale	0.99993333
Ellipsoid	Semi-major axis: 20925604.474 Flattening: 298.25722154

Local site

Type	Grid
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Datum transformation

Type	Three parameter
Semi-major axis	20925604.474
Flattening	298.257223
Translation X	0.000
Translation Y	0.000
Translation Z	0.000

Vertical adjustment

Geoid file	G09US
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Coordinate system

System	US State Plane 1983
Zone	Missouri Central 2402
Datum	NAD 1983 (Conus)

Feature library

Library name	ACG - Desc Keys
Library File Name	ACG - Desc Keys.fxl
Attribute Support	No

Point	1	North	1244834.537	East	1667083.832	Elevation	0.000	Code	CALC GPS LOCATION
Point	2	North	1238696.980	East	1704185.842	Elevation	0.000	Code	CALC GPS LOCATION
Point	3	North	1224618.882	East	1752149.414	Elevation	0.000	Code	CALC GPS LOCATION
Point	4	North	1179302.111	East	1747890.110	Elevation	0.000	Code	CALC GPS LOCATION
Point	5	North	1196683.821	East	1688658.154	Elevation	0.000	Code	CALC GPS LOCATION
Point	6	North	1201850.637	East	1645780.054	Elevation	0.000	Code	CALC GPS LOCATION
Point	7	North	1141808.060	East	1630554.518	Elevation	0.000	Code	CALC GPS LOCATION
Point	8	North	1141560.926	East	1666999.145	Elevation	0.000	Code	CALC GPS LOCATION
Point	9	North	1137642.655	East	1710075.040	Elevation	0.000	Code	CALC GPS LOCATION
Point	10	North	1136951.064	East	1736659.922	Elevation	0.000	Code	CALC GPS LOCATION
Point	11	North	1110551.497	East	1741459.443	Elevation	0.000	Code	CALC GPS LOCATION
Point	12	North	1105381.791	East	1701123.593	Elevation	0.000	Code	CALC GPS LOCATION
Point	13	North	1111450.779	East	1657895.033	Elevation	0.000	Code	CALC GPS LOCATION
Point	14	North	1082954.819	East	1678638.652	Elevation	0.000	Code	CALC GPS LOCATION
Point	15	North	1084070.619	East	1711446.504	Elevation	0.000	Code	CALC GPS LOCATION
Point	16	North	1065089.584	East	1732704.118	Elevation	0.000	Code	CALC GPS LOCATION
Point	17	North	1056179.084	East	1681898.538	Elevation	0.000	Code	CALC GPS LOCATION
Point	18	North	1033485.915	East	1715488.941	Elevation	0.000	Code	CALC GPS LOCATION
Point	19	North	1170297.305	East	1715806.033	Elevation	0.000	Code	CALC GPS LOCATION
Point	20	North	1175421.474	East	1650377.039	Elevation	0.000	Code	CALC GPS LOCATION
Point	21	North	1217522.209	East	1725045.274	Elevation	0.000	Code	CALC GPS LOCATION

Point	22	North	1224355.981	East	1687891.630	Elevation	0.000	Code	CALC GPS LOCATION
Point	23	North	1119579.108	East	1686949.357	Elevation	0.000	Code	CALC GPS LOCATION
Point	24	North	1150307.793	East	1690214.174	Elevation	0.000	Code	CALC GPS LOCATION
Point	25	North	1139983.227	East	1676794.331	Elevation	0.000	Code	CALC GPS LOCATION
Point	26	North	1071680.498	East	1711333.778	Elevation	0.000	Code	CALC GPS LOCATION
Point	27	North	1041743.776	East	1694757.145	Elevation	0.000	Code	CALC GPS LOCATION
Point	28	North	1230694.122	East	1742823.685	Elevation	0.000	Code	CALC GPS LOCATION
Point	29	North	1195708.169	East	1719627.618	Elevation	0.000	Code	CALC GPS LOCATION
Point	30	North	1159262.622	East	1690909.590	Elevation	0.000	Code	CALC GPS LOCATION
Point	31	North	1121195.956	East	1697940.086	Elevation	0.000	Code	CALC GPS LOCATION
Point	32	North	1129061.097	East	1668049.492	Elevation	0.000	Code	CALC GPS LOCATION
Point	33	North	1119908.301	East	1681607.900	Elevation	0.000	Code	CALC GPS LOCATION
Point	34	North	1140827.769	East	1684669.237	Elevation	0.000	Code	CALC GPS LOCATION
Point	35	North	1148111.896	East	1709667.655	Elevation	0.000	Code	CALC GPS LOCATION
Point	36	North	1129193.840	East	1689324.323	Elevation	0.000	Code	CALC GPS LOCATION
Point	37	North	1135367.470	East	1692594.981	Elevation	0.000	Code	CALC GPS LOCATION
Point	38	North	1146500.291	East	1699780.388	Elevation	0.000	Code	CALC GPS LOCATION
Point	39	North	1154352.982	East	1646102.074	Elevation	0.000	Code	CALC GPS LOCATION
Point	40	North	1120987.258	East	1720154.491	Elevation	0.000	Code	CALC GPS LOCATION
Point	41	North	1226102.779	East	1659282.030	Elevation	0.000	Code	CALC GPS LOCATION
Point	42	North	1226547.923	East	1743265.264	Elevation	0.000	Code	CALC GPS LOCATION
Point	43	North	1158631.066	East	1705284.482	Elevation	0.000	Code	CALC GPS LOCATION
Point	44	North	1067256.432	East	1708054.192	Elevation	0.000	Code	CALC GPS LOCATION

Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation mask	10	PDOP mask	6						
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Survey event

Survey event	Rover started
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Point	MOBO	Latitude	38°55'52.53379"N	Longitude	92°46'43.66013"W	Height	678.135	Code	
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000

Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOBO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1842	Seconds	134762	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	701	ΔX	69757.980	ΔY	5514.959	ΔZ	10750.223	Code	ASPH
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.020	Vt Prec	0.032	VDOP	1.0
QC 2		Satellites	19	PDOP	1.2	HDOP	0.6		
		Base data age	0.60000002384186	RMS	18.071	Positions used	33		
		VCV xx (m²)	0.000041	VCV xy (m²)	0.000022	VCV xz (m²)	0.000003		
				VCV yy (m²)	0.000100	VCV yz (m²)	-0.000042		
						VCV zz (m²)	0.000081		
Point	702	ΔX	69729.905	ΔY	5559.451	ΔZ	10803.484	Code	GS
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.038	Vt Prec	0.059	VDOP	1.1
QC 2		Satellites	17	PDOP	1.3	HDOP	0.7		
		Base data age	0.60000002384186	RMS	16.560	Positions used	35		
		VCV xx (m²)	0.000084	VCV xy (m²)	0.000059	VCV xz (m²)	0.000002		
				VCV yy (m²)	0.000222	VCV yz (m²)	-0.000086		
						VCV zz (m²)	0.000151		
Point	703	ΔX	69805.728	ΔY	5569.614	ΔZ	10809.712	Code	EDW
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.040	Vt Prec	0.063	VDOP	1.2
QC 2		Satellites	17	PDOP	1.4	HDOP	0.8		
		Base data age	0.60000002384186	RMS	39.589	Positions used	33		
		VCV xx (m²)	0.000112	VCV xy (m²)	0.000071	VCV xz (m²)	-0.000008		
				VCV yy (m²)	0.000251	VCV yz (m²)	-0.000098		
						VCV zz (m²)	0.000157		

Initialization event: Lost

GPS week	1842	Seconds	135692	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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Note	New base station detected								
Point	MOCO	Latitude	38°59'32.00228"N	Longitude	92°17'04.88676"W	Height	681.380	Code	

GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center

Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1842	Seconds	137579	Initialization type	On the fly	Survey type	Real-time	Initialization count	2
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	3901	ΔX	-55353.494	ΔY	4944.418	ΔZ	3246.511	Code	PK IN ASPH
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.021	Vt Prec	0.033		
QC 2		Satellites	16	PDOP	1.4	HDOP	0.8	VDOP	1.2
		Base data age	1.2000000476837	RMS	24.242	Positions used	35		
		VCV xx (m²)	0.000024	VCV xy (m²)	0.000012	VCV xz (m²)	-0.000004		
				VCV yy (m²)	0.000111	VCV yz (m²)	-0.000071		
						VCV zz (m²)	0.000097		

Point	3902	ΔX	-55324.693	ΔY	4985.590	ΔZ	3291.934	Code	NAIL GS
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.027	Vt Prec	0.041		
QC 2		Satellites	15	PDOP	1.7	HDOP	0.9	VDOP	1.4
		Base data age	0.40000000596046	RMS	38.495	Positions used	48		
		VCV xx (m²)	0.000030	VCV xy (m²)	0.000020	VCV xz (m²)	-0.000016		
				VCV yy (m²)	0.000154	VCV yz (m²)	-0.000112		
						VCV zz (m²)	0.000150		

Initialization event: Lost

GPS week	1842	Seconds	138358	Initialization type	On the fly	Survey type	Real-time	Initialization count	2
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Initialization event: Gained

GPS week	1842	Seconds	138379	Initialization type	On the fly	Survey type	Real-time	Initialization count	3
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Point	3903	ΔX	-55259.819	ΔY	4988.746	ΔZ	3294.855	Code	NAIL GS
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.048	Vt Prec	0.078		
QC 2		Satellites	13	PDOP	2.2	HDOP	1.1	VDOP	2.0
		Base data age	0.60000002384186	RMS	46.400	Positions used	67		
		VCV xx (m²)	0.000064	VCV xy (m²)	0.000083	VCV xz (m²)	-0.000072		
				VCV yy (m²)	0.000408	VCV yz (m²)	-0.000314		
						VCV zz (m²)	0.000365		

Initialization event: Lost

GPS week	1842	Seconds	138553	Initialization type	On the fly	Survey type	Real-time	Initialization count	3
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Initialization event: Gained

GPS week	1842	Seconds	138566	Initialization type	On the fly	Survey type	Real-time	Initialization count	4
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Initialization event: Lost

GPS week	1842	Seconds	138594	Initialization type	On the fly	Survey type	Real-time	Initialization count	4
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Initialization event: Gained

GPS week	1842	Seconds	138606	Initialization type	On the fly	Survey type	Real-time	Initialization count	5
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Initialization event: Lost

GPS week	1842	Seconds	139442	Initialization type	On the fly	Survey type	Real-time	Initialization count	5
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Note	New base station detected								
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Note	New base station detected								
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Note	New base station detected								
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1842	Seconds	141103	Initialization type	On the fly	Survey type	Real-time	Initialization count	6
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	5000	ΔX	-46587.459	ΔY	-22195.165	ΔZ	-30159.056	Code	MON BO41
		Method	Fixed	Type	Observed control point	Search class	Normal		
Antenna height	5.000	Type	Uncorrected	Hz Prec	0.019	Vt Prec	0.027		
QC 1		Satellites	14	PDOP	1.5	HDOP	0.9	VDOP	1.2
		Base data age	0.80000001192093	RMS	17.780	Positions used	183		
QC 2		VCV xx (m²)	0.000024	VCV xy (m²)	0.000005	VCV xz (m²)	-0.000002		
				VCV yy (m²)	0.000081	VCV yz (m²)	-0.000053		
						VCV zz (m²)	0.000063		

Initialization event: Lost

GPS week	1842	Seconds	145678	Initialization type	On the fly	Survey type	Real-time	Initialization count	6
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Initialization event: Gained

GPS week	1842	Seconds	146696	Initialization type	On the fly	Survey type	Real-time	Initialization count	7
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Point	1301	ΔX	-44738.628	ΔY	-22354.709	ΔZ	-30232.915	Code	NAIL IN GRAVEL
		Method	Fixed	Type	Topo point	Search class	Normal		
Antenna height	5.000	Type	Uncorrected	Hz Prec	0.020	Vt Prec	0.053		
QC 1		Satellites	11	PDOP	2.3	HDOP	1.0	VDOP	2.2
		Base data age	0.60000002384186	RMS	17.576	Positions used	19		
QC 2		VCV xx (m²)	0.000038	VCV xy (m²)	0.000027	VCV xz (m²)	-0.000022		
				VCV yy (m²)	0.000254	VCV yz (m²)	-0.000198		
						VCV zz (m²)	0.000202		

Warnings (1301)	Poor precision								
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Point	1302	ΔX	-44681.469	ΔY	-22363.388	ΔZ	-30239.152	Code	NAIL GS
		Method	Fixed	Type	Topo point	Search class	Normal		
Antenna height	5.000	Type	Uncorrected	Hz Prec	0.021	Vt Prec	0.052		
QC 1		Satellites	11	PDOP	2.4	HDOP	1.1	VDOP	2.2
		Base data age	2.2000000476837	RMS	13.290	Positions used	46		
QC 2		VCV xx (m²)	0.000041	VCV xy (m²)	0.000027	VCV xz (m²)	-0.000023		
				VCV yy (m²)	0.000247	VCV yz (m²)	-0.000190		
						VCV zz (m²)	0.000194		

Initialization event: Lost

GPS week	1842	Seconds	147545	Initialization type	On the fly	Survey type	Real-time	Initialization count	7
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Note	New base station detected
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1842	Seconds	147781	Initialization type	On the fly	Survey type	Real-time	Initialization count	8
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Initialization event: Lost

GPS week	1842	Seconds	147803	Initialization type	On the fly	Survey type	Real-time	Initialization count	8
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Note	New base station detected
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1842	Seconds	147918	Initialization type	On the fly	Survey type	Real-time	Initialization count	9
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Survey event

Survey event	End survey
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Instrument

Instrument type	Trimble VX/S Series
EDM Refractive Index	273.6
EDM Carrier Wavelength	79.2
Horizontal Circle Mode	Set to azimuth
Horizontal Angle Precision	0°00'03"
Vertical Angle Precision	0°00'03"
EDM precision	2mm +2ppm
Backsight centering error	0.010

Atmosphere

Pressure	30.16inHg	Temperature	70.0°F	ppm	-1.1				
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Curvature correction	Yes	Refraction correction	Yes	Refraction const.	0.142				
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Station setup

Station	1302	Instrument height	5.460	Station type	Station setup	Scale factor	1.00000000	Std Error	?
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Orientation

Station	1302	Backsight point	1301	Orientation correction	0°00'00"	Orient. Std Err	?		
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Point (B.S.)	1301	HA	278°38'20"	VA	91°26'09"	SD	58.124	Code	NAIL IN GRAVEL
Std Errors		HA	0°00'03"	VA	0°00'03"	SD	0.007		
Target height	5.000	Prism constant	10.0mm						
Deltas	1301	Azimuth	?	H.Distance	0.003	V.Distance	0.056		
Point	1303	HA	177°36'09"	VA	99°46'09"	SD	38.066	Code	NAIL GS
Std Errors		HA	0°00'03"	VA	0°00'03"	SD	0.007		
Target height	5.000	Prism constant	10.0mm						

Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation mask	10	PDOP mask	6						
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Survey event

Survey event	Rover started
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GNSS receiver

Receiver type	Unknown
Serial number	0
Firmware version	Unknown External
Antenna type	Antenna Phase Center
Measurement method	0.000
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1842	Seconds	150808	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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Initialization event: Lost

GPS week	1842	Seconds	150977	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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Initialization event: Gained

GPS week	1842	Seconds	151060	Initialization type	On the fly	Survey type	Real-time	Initialization count	2
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Initialization event: Lost

GPS week	1842	Seconds	151114	Initialization type	On the fly	Survey type	Real-time	Initialization count	2
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Initialization event: Gained

GPS week	1842	Seconds	151145	Initialization type	On the fly	Survey type	Real-time	Initialization count	3
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Initialization event: Failed

GPS week	1842	Seconds	151151	Initialization type	On the fly	Survey type	Real-time	Initialization count	3
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Initialization event: Gained

GPS week	1842	Seconds	151522	Initialization type	On the fly	Survey type	Real-time	Initialization count	4
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Initialization event: Lost

GPS week	1842	Seconds	151678	Initialization type	On the fly	Survey type	Real-time	Initialization count	4
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Initialization event: Gained

GPS week	1842	Seconds	152097	Initialization type	On the fly	Survey type	Real-time	Initialization count	5
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	5001	ΔX	-47444.854	ΔY	-22845.677	ΔZ	-31009.817	Code	NAIL
		Method	Fixed	Type	Observed control point	Search class	Normal		
Antenna height	5.000	Type	Uncorrected	Hz Prec	0.018	Vt Prec	0.025		
QC 1		Satellites	14	PDOP	1.4	HDOP	0.8	VDOP	1.2
		Base data age	1	RMS	18.602	Positions used	183		
QC 2		VCV xx (m²)	0.000020	VCV xy (m²)	-0.000001	VCV xz (m²)	0.000001		
				VCV yy (m²)	0.000079	VCV yz (m²)	-0.000030		
						VCV zz (m²)	0.000044		

Survey event

Survey event	End survey
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Instrument

Instrument type	Trimble VX/S Series
EDM Refractive Index	273.6
EDM Carrier Wavelength	79.2
Horizontal Circle Mode	Set to azimuth
Horizontal Angle Precision	0°00'03"
Vertical Angle Precision	0°00'03"
EDM precision	2mm +2ppm
Backsight centering error	0.010

Atmosphere

Pressure	30.16inHg	Temperature	75.0°F	ppm	1.4				
Curvature correction	Yes	Refraction correction	Yes	Refraction const.	0.142				

Station setup

Station	5000	Instrument height	5.665	Station type	Station setup	Scale factor	1.00000000	Std Error	?
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Orientation

Station	5000	Backsight point	5001	Orientation correction	0°00'00"	Orient. Std Err	?		
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Point (B.S.)	5001	HA	217°08'06"	VA	90°01'13"	SD	1371.841	Code	NAIL
Std Errors		HA	0°00'03"	VA	0°00'03"	SD	0.009		
Target height	5.000	Prism constant	10.0mm						
Deltas	5001	Azimuth	?	H.Distance	0.016	V.Distance	0.102		
Point	5002	HA	318°18'46"	VA	89°49'31"	SD	1195.995	Code	MON BO41A
Std Errors		HA	0°00'03"	VA	0°00'03"	SD	0.009		
Target height	5.000	Prism constant	10.0mm						

Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation mask	10	PDOP mask	6						
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Survey event

Survey event	Rover started
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1842	Seconds	158519	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000

Horizontal offset	0.000
Vertical offset	0.213

Point	801	ΔX	-34817.002	ΔY	-3847.635	ΔZ	-6808.656	Code	NAIL GS
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.017	Vt Prec	0.039		
QC 2		Satellites	14	PDOP	1.7	HDOP	0.8	VDOP	1.6
		Base data age	0.60000002384186	RMS	19.318	Positions used	67		
		VCV xx (m²)	0.000015	VCV xy (m²)	0.000006	VCV xz (m²)	-0.000006		
				VCV yy (m²)	0.000133	VCV yz (m²)	-0.000109		
						VCV zz (m²)	0.000134		

Initialization event: Lost

GPS week	1842	Seconds	159358	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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Initialization event: Gained

GPS week	1842	Seconds	159375	Initialization type	On the fly	Survey type	Real-time	Initialization count	2
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Point	803	ΔX	-34875.252	ΔY	-3883.201	ΔZ	-6856.997	Code	NAIL GS EDW
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.036	Vt Prec	0.070		
QC 2		Satellites	12	PDOP	1.9	HDOP	0.9	VDOP	1.7
		Base data age	0.80000001192093	RMS	33.412	Positions used	46		
		VCV xx (m²)	0.000047	VCV xy (m²)	-0.000003	VCV xz (m²)	-0.000001		
				VCV yy (m²)	0.000518	VCV yz (m²)	-0.000387		
						VCV zz (m²)	0.000392		

Initialization event: Lost

GPS week	1842	Seconds	160326	Initialization type	On the fly	Survey type	Real-time	Initialization count	2
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Initialization event: Gained

GPS week	1842	Seconds	160814	Initialization type	On the fly	Survey type	Real-time	Initialization count	3
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Point	2501	ΔX	-25078.215	ΔY	-5362.502	ΔZ	-7956.227	Code	PK IN CONC
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.012	Vt Prec	0.025		
QC 2		Satellites	16	PDOP	1.3	HDOP	0.6	VDOP	1.2
		Base data age	0.80000001192093	RMS	11.685	Positions used	40		
		VCV xx (m²)	0.000011	VCV xy (m²)	0.000005	VCV xz (m²)	-0.000004		
				VCV yy (m²)	0.000067	VCV yz (m²)	-0.000043		
						VCV zz (m²)	0.000045		

Initialization event: Lost

GPS week	1842	Seconds	161185	Initialization type	On the fly	Survey type	Real-time	Initialization count	3
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Note	New base station detected
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1842	Seconds	161801	Initialization type	On the fly	Survey type	Real-time	Initialization count	4
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	3401	ΔX	-17185.739	ΔY	-5173.846	ΔZ	-7300.109	Code	PK IN ASPH
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.012	Vt Prec	0.022	VDOP	1.0
QC 2		Satellites	15	PDOP	1.1	HDOP	0.5		
		Base data age	0.80000001192093	RMS	11.258	Positions used	36		
		VCV xx (m²)	0.000010	VCV xy (m²)	0.000004	VCV xz (m²)	-0.000003		
				VCV yy (m²)	0.000054	VCV yz (m²)	-0.000030		
						VCV zz (m²)	0.000031		

Initialization event: Lost

GPS week	1842	Seconds	162075	Initialization type	On the fly	Survey type	Real-time	Initialization count	4
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Initialization event: Gained

GPS week	1842	Seconds	162860	Initialization type	On the fly	Survey type	Real-time	Initialization count	5
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Point	3701	ΔX	-9422.008	ΔY	-8933.605	ΔZ	-11552.435	Code	PK IN ASPH
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.012	Vt Prec	0.020	VDOP	1.0
QC 2		Satellites	18	PDOP	1.1	HDOP	0.6		
		Base data age	1.2000000476837	RMS	12.743	Positions used	34		
		VCV xx (m²)	0.000011	VCV xy (m²)	0.000003	VCV xz (m²)	-0.000001		
				VCV yy (m²)	0.000051	VCV yz (m²)	-0.000022		
						VCV zz (m²)	0.000023		

Initialization event: Lost

GPS week	1842	Seconds	163159	Initialization type	On the fly	Survey type	Real-time	Initialization count	5
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Initialization event: Gained

GPS week	1842	Seconds	164049	Initialization type	On the fly	Survey type	Real-time	Initialization count	6
Point	3601	ΔX Method	-12853.346 Fixed	ΔY Type	-12659.572 Topo point	ΔZ Search class	-16371.277 Normal	Code	PK IN ASPH
Antenna height	5.000	Type	Uncorrected	Hz Prec	0.012	Vt Prec	0.018	VDOP	0.8
QC 1		Satellites	18	PDOP	1.0	HDOP	0.6		
		Base data age	0.40000000596046	RMS	12.465	Positions used	35		
QC 2		VCV xx (m²)	0.000011	VCV xy (m²)	0.000003	VCV xz (m²)	0.000000		
				VCV yy (m²)	0.000046	VCV yz (m²)	-0.000017		
						VCV zz (m²)	0.000019		

Initialization event: Lost

GPS week	1842	Seconds	164402	Initialization type	On the fly	Survey type	Real-time	Initialization count	6
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Note	New base station detected
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GNSS receiver

Receiver type	Unknown
Serial number	0
Firmware version	Unknown External
Antenna type	Antenna Phase Center
Measurement method	0.000
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected
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Initialization event: Gained

GPS week	1842	Seconds	165626	Initialization type	On the fly	Survey type	Real-time	Initialization count	7
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	3201	ΔX Method	-34110.636 Fixed	ΔY Type	-11756.683 Topo point	ΔZ Search class	-16518.815 Normal	Code	PK IN ASPH
Antenna height	5.000	Type	Uncorrected	Hz Prec	0.019	Vt Prec	0.028	VDOP	1.0
QC 1		Satellites	16	PDOP	1.2	HDOP	0.7		
		Base data age	0.60000002384186	RMS	15.977	Positions used	34		
QC 2		VCV xx (m²)	0.000026	VCV xy (m²)	0.000009	VCV xz (m²)	0.000006		
				VCV yy (m²)	0.000095	VCV yz (m²)	-0.000037		
						VCV zz (m²)	0.000054		

Survey event

Survey event	End survey
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Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation mask	10	PDOP mask	6						
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Survey event

Survey event	Rover started
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1842	Seconds	501922	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	3301	ΔX	-20834.268	ΔY	-18150.256	ΔZ	-23602.245	Code	PK IN ASPH
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.021	Vt Prec	0.036		
QC 2		Satellites	17	PDOP	1.3	HDOP	0.7	VDOP	1.1
		Base data age	0.80000001192093	RMS	21.986	Positions used	33		
		VCV xx (m²)	0.000020	VCV xy (m²)	0.000002	VCV xz (m²)	0.000001		
				VCV yy (m²)	0.000127	VCV yz (m²)	-0.000092		
						VCV zz (m²)	0.000121		

Initialization event: Lost

GPS week	1842	Seconds	502450	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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Initialization event: Gained

GPS week	1842	Seconds	502799	Initialization type	On the fly	Survey type	Real-time	Initialization count	2
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Initialization event: Lost

GPS week	1842	Seconds	502832	Initialization type	On the fly	Survey type	Real-time	Initialization count	2
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Initialization event: Gained

GPS week	1842	Seconds	503408	Initialization type	On the fly	Survey type	Real-time	Initialization count	3
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Point	2301	ΔX	-15491.624	ΔY	-18594.857	ΔZ	-23844.306	Code	PK IN CONC
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.014	Vt Prec	0.031		
QC 2		Satellites	16	PDOP	1.4	HDOP	0.7	VDOP	1.3
		Base data age	0.80000001192093	RMS	19.521	Positions used	39		
		VCV xx (m²)	0.000012	VCV xy (m²)	0.000004	VCV xz (m²)	-0.000003		
				VCV yy (m²)	0.000086	VCV yz (m²)	-0.000065		
						VCV zz (m²)	0.000079		

Initialization event: Lost

GPS week	1842	Seconds	503706	Initialization type	On the fly	Survey type	Real-time	Initialization count	3
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Note	New base station detected								
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GNSS receiver

Receiver type	Unknown								
Serial number									
Firmware version	0								
Antenna type	Unknown External								
Measurement method	Antenna Phase Center								
Tape adjustment	0.000								
Horizontal offset	0.000								
Vertical offset	0.000								

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1842	Seconds	504817	Initialization type	On the fly	Survey type	Real-time	Initialization count	4
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GNSS receiver

Receiver type	R6-2								
Serial number	5134471273								
Firmware version	4.19								
Antenna type	R6-2 Internal								
Measurement method	Bottom of antenna mount								
Tape adjustment	0.000								
Horizontal offset	0.000								
Vertical offset	0.213								

Point	3101	ΔX	-4464.983	ΔY	-18080.172	ΔZ	-22573.039	Code	PK IN ASPH
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.016	Vt Prec	0.027		
QC 2		Satellites	17	PDOP	1.2	HDOP	0.6	VDOP	1.1
		Base data age	1	RMS	14.844	Positions used	34		
		VCV xx (m²)	0.000014	VCV xy (m²)	0.000003	VCV xz (m²)	-0.000003		
				VCV yy (m²)	0.000085	VCV yz (m²)	-0.000055		
						VCV zz (m²)	0.000058		

Initialization event: Lost

GPS week	1842	Seconds	505222	Initialization type	On the fly	Survey type	Real-time	Initialization count	4
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Note	New base station detected
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Note	New base station detected
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1842	Seconds	506744	Initialization type	On the fly	Survey type	Real-time	Initialization count	5
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Initialization event: Lost

GPS week	1842	Seconds	506759	Initialization type	On the fly	Survey type	Real-time	Initialization count	5
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Initialization event: Gained

GPS week	1842	Seconds	506767	Initialization type	On the fly	Survey type	Real-time	Initialization count	6
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Survey event

Survey event	End survey
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Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation mask	10	PDOP mask	6						
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Survey event

Survey event	Rover started
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Point	MOMC	Latitude	39°09'42.50094"N	Longitude	91°49'45.93439"W	Height	715.169	Code	
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOMC	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1843	Seconds	401120	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	2801	ΔX Method	-87172.172 Fixed	ΔY Type	14713.471 Topo point	ΔZ Search class	14439.924 Normal	Code	PK
Antenna height	5.000	Type	Uncorrected	Hz Prec	0.024	Vt Prec	0.036		
QC 1		Satellites	15	PDOP	1.3	HDOP	0.7	VDOP	1.1
QC 2		Base data age	0.80000001192093	RMS	20.625	Positions used	44		
		VCV xx (m²)	0.000050	VCV xy (m²)	0.000002	VCV xz (m²)	0.000000		
				VCV yy (m²)	0.000139	VCV yz (m²)	-0.000070		
						VCV zz (m²)	0.000098		
Stake out point (2801) Method	Design point: 28Code: CALC GPS LOCATION To the point								
Stakeout	Deltas: Grid	Δ North	-0.917	Δ East	-1.101	ΔElev	-882.388		

Initialization event: Lost

GPS week	1843	Seconds	401539	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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Initialization event: Gained

GPS week	1843	Seconds	401997	Initialization type	On the fly	Survey type	Real-time	Initialization count	2
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Point	4201	ΔX Method	-86846.540 Fixed	ΔY Type	12073.686 Topo point	ΔZ Search class	11227.412 Normal	Code	PK
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Antenna height	5.000	Type	Uncorrected	Hz Prec	0.027	Vt Prec	0.038		
QC 1		Satellites	15	PDOP	1.2	HDOP	0.7	VDOP	1.0
QC 2		Base data age	1.2000000476837	RMS	27.241	Positions used	44		
		VCV xx (m²)	0.000051	VCV xy (m²)	0.000005	VCV xz (m²)	-0.000003		
				VCV yy (m²)	0.000162	VCV yz (m²)	-0.000100		
						VCV zz (m²)	0.000126		

Initialization event: Lost

GPS week	1843	Seconds	402260	Initialization type	On the fly	Survey type	Real-time	Initialization count	2
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Initialization event: Gained

GPS week	1843	Seconds	402881	Initialization type	On the fly	Survey type	Real-time	Initialization count	3
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Point	301	ΔX	-78021.198	ΔY	10525.392	ΔZ	9685.531	Code	PK
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.034	Vt Prec	0.049	VDOP	1.2
QC 2		Satellites	13	PDOP	1.5	HDOP	0.8		
		Base data age	0.80000001192093	RMS	30.916	Positions used	62		
		VCV xx (m²)	0.000057	VCV xy (m²)	0.000018	VCV xz (m²)	-0.000013		
				VCV yy (m²)	0.000272	VCV yz (m²)	-0.000199		
						VCV zz (m²)	0.000220		

Point	302	ΔX	-78039.070	ΔY	10504.129	ΔZ	9659.093	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.042	Vt Prec	0.067	VDOP	1.4
QC 2		Satellites	12	PDOP	1.6	HDOP	0.9		
		Base data age	1	RMS	34.516	Positions used	61		
		VCV xx (m²)	0.000086	VCV xy (m²)	0.000035	VCV xz (m²)	-0.000032		
				VCV yy (m²)	0.000477	VCV yz (m²)	-0.000373		
						VCV zz (m²)	0.000412		

Initialization event: Lost

GPS week	1843	Seconds	403725	Initialization type	On the fly	Survey type	Real-time	Initialization count	3
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Initialization event: Gained

GPS week	1843	Seconds	403740	Initialization type	On the fly	Survey type	Real-time	Initialization count	4
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Point	303	ΔX	-78080.521	ΔY	10564.385	ΔZ	9724.026	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.052	Vt Prec	0.137	VDOP	3.7
QC 2		Satellites	10	PDOP	3.9	HDOP	1.3		
		Base data age	1.2000000476837	RMS	47.143	Positions used	27		
		VCV xx (m²)	0.000226	VCV xy (m²)	0.000205	VCV xz (m²)	-0.000209		
				VCV yy (m²)	0.001641	VCV yz (m²)	-0.001390		
						VCV zz (m²)	0.001450		

Warnings (303)	Poor precision
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Initialization event: Lost

GPS week	1843	Seconds	403833	Initialization type	On the fly	Survey type	Real-time	Initialization count	4
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Survey event

Survey event	End survey
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Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation mask	10	PDOP mask	6						
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Survey event

Survey event	Rover started
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOMC	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1843	Seconds	408037	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	2101	ΔX	-105295.011	ΔY	7142.658	ΔZ	4258.405	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	H_z Prec	0.025	V_t Prec	0.038	VDOP	1.2
QC 2		Satellites	14	PDOP	1.4	HDOP	0.8		
		Base data age	1	RMS	20.190	Positions used	62		
		VCV xx (m²)	0.000048	VCV xy (m²)	0.000004	VCV xz (m²)	-0.000012		
				VCV yy (m²)	0.000169	VCV yz (m²)	-0.000077		
						VCV zz (m²)	0.000109		
Point	2102	ΔX	-105331.473	ΔY	7123.316	ΔZ	4231.298	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	H_z Prec	0.023	V_t Prec	0.037	VDOP	1.1
QC 2		Satellites	16	PDOP	1.4	HDOP	0.7		
		Base data age	0.80000001192093	RMS	19.693	Positions used	63		
		VCV xx (m²)	0.000044	VCV xy (m²)	0.000001	VCV xz (m²)	-0.000006		
				VCV yy (m²)	0.000156	VCV yz (m²)	-0.000068		
						VCV zz (m²)	0.000092		

Survey event

Survey event	End survey
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Instrument

Instrument type	Trimble VX/S Series
EDM Refractive Index	273.6
EDM Carrier Wavelength	79.2
Horizontal Circle Mode	Set to azimuth
Horizontal Angle Precision	0°00'03"
Vertical Angle Precision	0°00'03"
EDM precision	2mm +2ppm
Backsight centering error	0.010

Atmosphere

Pressure	30.16inHg	Temperature	75.0°F	ppm	1.4				
Curvature correction	Yes	Refraction correction	Yes	Refraction const.	0.142				

Station setup

Station	2101	Instrument height	5.525	Station type	Station setup	Scale factor	1.00000000	Std Error	?
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Orientation

Station	2101	Backsight point	2102	Orientation correction	0°00'00"	Orient. Std Err	?		
Point (B.S.)	2102	HA	226°06'43"	VA	91°48'22"	SD	49.393	Code	NAIL
Std Errors		HA	0°00'03"	VA	0°00'03"	SD	0.007		
Target height	5.000	Prism constant	10.0mm						
Deltas	2102	Azimuth	?	H.Dist	-0.032	V.Dist	-0.022		
Point	2103	HA	100°52'38"	VA	95°51'30"	SD	49.263	Code	NAIL
Std Errors		HA	0°00'03"	VA	0°00'03"	SD	0.007		
Target height	5.000	Prism constant	10.0mm						

Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation mask	10	PDOP mask	6						
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Survey event

Survey event	Rover started
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOMC	Antenna	0.000	Type	Corrected				
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		height							
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Initialization event: Gained

GPS week	1843	Seconds	413285	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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Initialization event: Lost

GPS week	1843	Seconds	413341	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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Initialization event: Gained

GPS week	1843	Seconds	413396	Initialization type	On the fly	Survey type	Real-time	Initialization count	2
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Initialization event: Lost

GPS week	1843	Seconds	413434	Initialization type	On the fly	Survey type	Real-time	Initialization count	2
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Initialization event: Gained

GPS week	1843	Seconds	413438	Initialization type	On the fly	Survey type	Real-time	Initialization count	3
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Initialization event: Lost

GPS week	1843	Seconds	413603	Initialization type	On the fly	Survey type	Real-time	Initialization count	3
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Initialization event: Gained

GPS week	1843	Seconds	413689	Initialization type	On the fly	Survey type	Real-time	Initialization count	4
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Initialization event: Lost

GPS week	1843	Seconds	413718	Initialization type	On the fly	Survey type	Real-time	Initialization count	4
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Initialization event: Gained

GPS week	1843	Seconds	413720	Initialization type	On the fly	Survey type	Real-time	Initialization count	5
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	201	ΔX	-125576.366	ΔY	21316.785	ΔZ	20627.865	Code	PK
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.036	Vt Prec	0.066		
QC 2		Satellites	15	PDOP	1.8	HDOP	0.9	VDOP	1.5
		Base data age	0.40000000596046	RMS	52.506	Positions used	51		
		VCV xx (m²)	0.000104	VCV xy (m²)	0.000059	VCV xz (m²)	0.000001		
				VCV yy (m²)	0.000434	VCV yz (m²)	-0.000265		
						VCV zz (m²)	0.000339		

Warnings (201)	Poor precision
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Point	202	ΔX	-125583.254	ΔY	21367.750	ΔZ	20682.949	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.041	Vt Prec	0.079		
QC 2		Satellites	13	PDOP	1.9	HDOP	0.9	VDOP	1.7
		Base data age	0.40000000596046	RMS	47.205	Positions used	65		
		VCV xx (m²)	0.000079	VCV xy (m²)	0.000050	VCV xz (m²)	-0.000014		
				VCV yy (m²)	0.000669	VCV yz (m²)	-0.000435		
						VCV zz (m²)	0.000474		

Survey event

Survey event	End survey
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Instrument

Instrument type	Trimble VX/S Series
EDM Refractive Index	273.6
EDM Carrier Wavelength	79.2
Horizontal Circle Mode	Set to azimuth
Horizontal Angle Precision	0°00'03"
Vertical Angle Precision	0°00'03"
EDM precision	2mm +2ppm
Backsight centering error	0.010

Atmosphere

Pressure	30.16inHg	Temperature	75.0°F	ppm	1.4				
Curvature correction	Yes	Refraction correction	Yes	Refraction const.	0.142				

Station setup

Station	203	Instrument height	5.430	Station type	Station setup	Scale factor	1.00000000	Std Error	?
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Orientation

Station	203	Backsight point	201	Orientation correction	0°00'00"	Orient. Std Err	?		
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Point (B.S.)	201	HA	189°05'52"	VA	87°33'15"	SD	101.444	Code	PK
Std Errors		HA	0°00'03"	VA	0°00'03"	SD	0.007		
Target height	5.000	Prism constant	10.0mm						

Deltas	201	Azimuth	?	H.Dist	0.051	V.Dist	-0.209		
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Point	204	HA	346°48'47"	VA	94°02'46"	SD	45.395	Code	NAIL
Std Errors		HA	0°00'03"	VA	0°00'03"	SD	0.007		
Target height	5.000	Prism constant	10.0mm						

Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation	10	PDOP mask	6						
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mask									
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Survey event

Survey event	Rover started
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1843	Seconds	491389	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	5004	ΔX	-15110.539	ΔY	-18267.816	ΔZ	-23390.058	Code	MON BO27
		Method	Fixed	Type	Observed control point	Search class	Normal		
Antenna height	5.000	Type	Uncorrected	Hz Prec	0.013	Vt Prec	0.026		
QC 1		Satellites	13	PDOP	1.7	HDOP	0.7	VDOP	1.5
		Base data age	0.60000002384186	RMS	16.332	Positions used	182		
QC 2		VCV xx (m²)	0.000014	VCV xy (m²)	0.000006	VCV xz (m²)	-0.000007		
				VCV yy (m²)	0.000059	VCV yz (m²)	-0.000046		
						VCV zz (m²)	0.000058		

Initialization event: Lost

GPS week	1843	Seconds	491817	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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Initialization event: Gained

GPS week	1843	Seconds	491837	Initialization type	On the fly	Survey type	Real-time	Initialization count	2
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Initialization event: Lost

GPS week	1843	Seconds	491955	Initialization type	On the fly	Survey type	Real-time	Initialization count	2
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Initialization event: Gained

GPS week	1843	Seconds	492164	Initialization type	On the fly	Survey type	Real-time	Initialization count	3
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Point	5005	ΔX	-15302.327	ΔY	-19736.926	ΔZ	-25199.432	Code	MON B027A
Antenna height	5.000	Method	Fixed	Type	Observed control point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.014	Vt Prec	0.025		
QC 2		Satellites	14	PDOP	1.7	HDOP	0.8	VDOP	1.5
		Base data age	1.6000000238419	RMS	24.390	Positions used	184		
		VCV xx (m²)	0.000016	VCV xy (m²)	0.000004	VCV xz (m²)	-0.000006		
				VCV yy (m²)	0.000059	VCV yz (m²)	-0.000042		
						VCV zz (m²)	0.000055		

Initialization event: Lost

GPS week	1843	Seconds	492478	Initialization type	On the fly	Survey type	Real-time	Initialization count	3
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Note	New base station detected
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1843	Seconds	493801	Initialization type	On the fly	Survey type	Real-time	Initialization count	4
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Initialization event: Lost

GPS week	1843	Seconds	493821	Initialization type	On the fly	Survey type	Real-time	Initialization count	4
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Initialization event: Gained

GPS week	1843	Seconds	493823	Initialization type	On the fly	Survey type	Real-time	Initialization count	5
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Initialization event: Lost

GPS week	1843	Seconds	493860	Initialization type	On the fly	Survey type	Real-time	Initialization count	5
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Initialization event: Gained

GPS week	1843	Seconds	493868	Initialization type	On the fly	Survey type	Real-time	Initialization count	6
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Initialization event: Lost

GPS week	1843	Seconds	493870	Initialization type	On the fly	Survey type	Real-time	Initialization count	6
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Initialization event: Gained

GPS week	1843	Seconds	493878	Initialization type	On the fly	Survey type	Real-time	Initialization count	7
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Initialization event: Lost

GPS week	1843	Seconds	493881	Initialization type	On the fly	Survey type	Real-time	Initialization count	7
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Initialization event: Gained

GPS week	1843	Seconds	494291	Initialization type	On the fly	Survey type	Real-time	Initialization count	8
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Initialization event: Lost

GPS week	1843	Seconds	494312	Initialization type	On the fly	Survey type	Real-time	Initialization count	8
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Note	New base station detected								
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GNSS receiver

Receiver type	Unknown								
Serial number									
Firmware version	0								
Antenna type	Unknown External								
Measurement method	Antenna Phase Center								
Tape adjustment	0.000								
Horizontal offset	0.000								
Vertical offset	0.000								

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1843	Seconds	495668	Initialization type	On the fly	Survey type	Real-time	Initialization count	9
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Survey event

Survey event	End survey								
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Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation mask	10	PDOP mask	6						
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Survey event

Survey event	Rover started								
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Point	MOJC	Latitude	38°34'47.29657"N	Longitude	92°17'40.74819"W	Height	659.664	Code	
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GNSS receiver

Receiver type	Unknown								
Serial number									
Firmware version	0								
Antenna type	Unknown External								
Measurement method	Antenna Phase Center								
Tape adjustment	0.000								
Horizontal offset	0.000								
Vertical offset	0.000								

Base point

Point	MOJC	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1844	Seconds	234605	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	1801	ΔX	17264.019	ΔY	20199.359	ΔZ	26117.606	Code	PK
		Method	Fixed	Type	Topo point	Search class	Normal		
Antenna height	5.000	Type	Uncorrected	H_z Prec	0.019	V_t Prec	0.031		
QC 1		Satellites	16	PDOP	1.5	HDOP	0.8	VDOP	1.3
		Base data age	1.2000000476837	RMS	18.737	Positions used	48		
QC 2		V_{CV} xx (m²)	0.000028	V_{CV} xy (m²)	-0.000005	V_{CV} xz (m²)	0.000000		
				V_{CV} yy (m²)	0.000113	V_{CV} yz (m²)	-0.000050		
						V_{CV} zz (m²)	0.000060		
Note	New base station detected								

GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOJC	Antenna height	0.000	Type	Corrected				
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Initialization event: Lost

GPS week	1844	Seconds	235326	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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Initialization event: Gained

GPS week	1844	Seconds	235332	Initialization type	On the fly	Survey type	Real-time	Initialization count	2
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	1802	ΔX	17301.684	ΔY	20171.518	ΔZ	26074.209	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.017	Vt Prec	0.025		
QC 2		Satellites	16	PDOP	1.3	HDOP	0.7	VDOP	1.1
		Base data age	0.60000002384186	RMS	17.097	Positions used	32		
		VCV xx (m²)	0.000020	VCV xy (m²)	0.000000	VCV xz (m²)	-0.000001		
				VCV yy (m²)	0.000081	VCV yz (m²)	-0.000033		
						VCV zz (m²)	0.000044		

Initialization event: Lost

GPS week	1844	Seconds	235690	Initialization type	On the fly	Survey type	Real-time	Initialization count	2
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Initialization event: Gained

GPS week	1844	Seconds	235717	Initialization type	On the fly	Survey type	Real-time	Initialization count	3
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Initialization event: Lost

GPS week	1844	Seconds	235739	Initialization type	On the fly	Survey type	Real-time	Initialization count	3
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Initialization event: Gained

GPS week	1844	Seconds	235900	Initialization type	On the fly	Survey type	Real-time	Initialization count	4
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Initialization event: Lost

GPS week	1844	Seconds	235925	Initialization type	On the fly	Survey type	Real-time	Initialization count	4
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Initialization event: Gained

GPS week	1844	Seconds	235977	Initialization type	On the fly	Survey type	Real-time	Initialization count	5
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Initialization event: Lost

GPS week	1844	Seconds	235997	Initialization type	On the fly	Survey type	Real-time	Initialization count	5
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Note	New base station detected								
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GNSS receiver

Receiver type	Unknown
Serial number	0
Firmware version	Unknown External
Antenna type	Antenna Phase Center
Measurement method	0.000
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOJC	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1844	Seconds	237123	Initialization type	On the fly	Survey type	Real-time	Initialization count	6
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	2701	ΔX	-3213.616	ΔY	26364.668	ΔZ	32474.537	Code	NAIL
		Method	Fixed	Type	Topo point	Search class	Normal		
Antenna height	5.000	Type	Uncorrected	Hz Prec	0.020	Vt Prec	0.034		
QC 1		Satellites	16	PDOP	1.4	HDOP	0.7	VDOP	1.2
		Base data age	0.60000002384186	RMS	16.732	Positions used	42		
QC 2		VCV xx (m²)	0.000027	VCV xy (m²)	0.000001	VCV xz (m²)	0.000002		
				VCV yy (m²)	0.000138	VCV yz (m²)	-0.000052		
						VCV zz (m²)	0.000069		

Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation mask	10	PDOP mask	6						
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Survey event

Survey event	Rover started
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOJC	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1844	Seconds	237631	Initialization type	On the fly	Survey type	Real-time	Initialization count	7
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Initialization event: Lost

GPS week	1844	Seconds	237978	Initialization type	On the fly	Survey type	Real-time	Initialization count	7
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Note	New base station detected
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOJC	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1844	Seconds	238950	Initialization type	On the fly	Survey type	Real-time	Initialization count	8
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	1701	ΔX	-15671.056	ΔY	35847.774	ΔZ	43818.098	Code	PK
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.020	Vt Prec	0.038	VDOP	1.6
QC 2		Satellites	15	PDOP	1.8	HDOP	0.8		
		Base data age	1.2000000476837	RMS	16.717	Positions used	67		
		VCV xx (m²)	0.000021	VCV xy (m²)	-0.000005	VCV xz (m²)	0.000009		
				VCV yy (m²)	0.000131	VCV yz (m²)	-0.000098		
						VCV zz (m²)	0.000139		

Point	1702	ΔX	-15606.471	ΔY	35858.846	ΔZ	43839.385	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.021	Vt Prec	0.040	VDOP	1.5
QC 2		Satellites	15	PDOP	1.7	HDOP	0.8		
		Base data age	0.80000001192093	RMS	18.597	Positions used	67		
		VCV xx (m²)	0.000021	VCV xy (m²)	-0.000003	VCV xz (m²)	0.000010		
				VCV yy (m²)	0.000140	VCV yz (m²)	-0.000110		
						VCV zz (m²)	0.000161		

Survey event

Survey event	End survey
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Instrument

Instrument type	Trimble VX/S Series
EDM Refractive Index	273.6
EDM Carrier Wavelength	79.2
Horizontal Circle Mode	Set to azimuth

Horizontal Angle Precision	0°00'03"
Vertical Angle Precision	0°00'03"
EDM precision	2mm +2ppm
Backsight centering error	0.010

Atmosphere

Pressure	30.16inHg	Temperature	70.0°F	ppm	-1.1				
Curvature correction	Yes	Refraction correction	Yes	Refraction const.	0.142				

Station setup

Station	1701	Instrument height	5.500	Station type	Station setup	Scale factor	1.00000000	Std Error	?
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Orientation

Station	1701	Backsight point	1702	Orientation correction	0°00'00"	Orient. Std Err	?		
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Point (B.S.)	1702	HA	68°27'00"	VA	88°11'45"	SD	68.871	Code	NAIL
Std Errors		HA	0°00'03"	VA	0°00'03"	SD	0.007		
Target height	5.000	Prism constant	10.0mm						
Deltas	1702	Azimuth	?	H.Dist	-0.022	V.Dist	-0.049		
Point	1703	HA	147°01'09"	VA	94°07'36"	SD	88.069	Code	NAIL
Std Errors		HA	0°00'03"	VA	0°00'03"	SD	0.007		
Target height	5.000	Prism constant	10.0mm						

Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation mask	10	PDOP mask	6						
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Survey event

Survey event	Rover started
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOJC	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1844	Seconds	242480	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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GNSS receiver

Receiver type	R6-2
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Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	4401	ΔX	10758.473	ΔY	41507.270	ΔZ	52560.674	Code	PK
		Method	Fixed	Type	Topo point	Search class	Normal		
Antenna height	5.000	Type	Uncorrected	Hz Prec	0.023	Vt Prec	0.042		
QC 1		Satellites	16	PDOP	1.4	HDOP	0.7	VDOP	1.2
		Base data age	0.40000000596046	RMS	24.525	Positions used	63		
QC 2		VCV xx (m²)	0.000024	VCV xy (m²)	0.000011	VCV xz (m²)	-0.000008		
				VCV yy (m²)	0.000176	VCV yz (m²)	-0.000133		
						VCV zz (m²)	0.000152		

Initialization event: Lost

GPS week	1844	Seconds	242757	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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Initialization event: Gained

GPS week	1844	Seconds	243233	Initialization type	On the fly	Survey type	Real-time	Initialization count	2
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Point	2601	ΔX	14155.190	ΔY	44153.000	ΔZ	55992.507	Code	PK
		Method	Fixed	Type	Topo point	Search class	Normal		
Antenna height	5.000	Type	Uncorrected	Hz Prec	0.024	Vt Prec	0.040		
QC 1		Satellites	16	PDOP	1.3	HDOP	0.6	VDOP	1.1
		Base data age	0.600000002384186	RMS	25.792	Positions used	63		
QC 2		VCV xx (m²)	0.000029	VCV xy (m²)	0.000014	VCV xz (m²)	-0.000011		
				VCV yy (m²)	0.000170	VCV yz (m²)	-0.000115		
						VCV zz (m²)	0.000131		

Initialization event: Lost

GPS week	1844	Seconds	243548	Initialization type	On the fly	Survey type	Real-time	Initialization count	2
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Initialization event: Gained

GPS week	1844	Seconds	244117	Initialization type	On the fly	Survey type	Real-time	Initialization count	3
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Point	5006	ΔX	24466.091	ΔY	42982.916	ΔZ	54965.766	Code	MON BO23
		Method	Fixed	Type	Observed control point	Search class	Normal		
Antenna height	5.000	Type	Uncorrected	Hz Prec	0.017	Vt Prec	0.032		
QC 1		Satellites	15	PDOP	1.4	HDOP	0.7	VDOP	1.3
		Base data age	0.600000002384186	RMS	22.248	Positions used	184		
QC 2		VCV xx (m²)	0.000021	VCV xy (m²)	0.000010	VCV xz (m²)	-0.000008		
				VCV yy (m²)	0.000114	VCV yz (m²)	-0.000066		
						VCV zz (m²)	0.000069		

Initialization event: Lost

GPS week	1844	Seconds	244412	Initialization type	On the fly	Survey type	Real-time	Initialization count	3
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Initialization event: Gained

GPS week	1844	Seconds	244787	Initialization type	On the fly	Survey type	Real-time	Initialization count	4
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Point	5007	ΔX	24393.315	ΔY	41989.400	ΔZ	53733.062	Code	MON BO23A
Antenna height	5.000	Method	Fixed	Type	Observed control point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.017	Vt Prec	0.030		
QC 2		Satellites	16	PDOP	1.3	HDOP	0.7	VDOP	1.1
		Base data age	0.80000001192093	RMS	20.760	Positions used	183		
		VCV xx (m²)	0.000021	VCV xy (m²)	0.000007	VCV xz (m²)	-0.000005		
				VCV yy (m²)	0.000106	VCV yz (m²)	-0.000052		
						VCV zz (m²)	0.000054		

Initialization event: Lost

GPS week	1844	Seconds	245078	Initialization type	On the fly	Survey type	Real-time	Initialization count	4
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Note	New base station detected
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOJC	Antenna height	0.000	Type	Corrected				
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Note	New base station detected
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOJC	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1844	Seconds	246367	Initialization type	On the fly	Survey type	Real-time	Initialization count	5
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	1601	ΔX	28922.132	ΔY	40396.199	ΔZ	51947.205	Code	PK
		Method	Fixed	Type	Topo point	Search class	Normal		

Antenna height	5.000	Type	Uncorrected	Hz Prec	0.022	Vt Prec	0.038		
QC 1		Satellites	17	PDOP	1.3	HDOP	0.7	VDOP	1.1
QC 2		Base data age	1.2000000476837	RMS	20.251	Positions used	27		
		VCV xx (m²)	0.000040	VCV xy (m²)	0.000013	VCV xz (m²)	-0.000003		
				VCV yy (m²)	0.000190	VCV yz (m²)	-0.000069		
						VCV zz (m²)	0.000070		
Point	1602	ΔX	28921.322	ΔY	40373.999	ΔZ	51918.640	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.022	Vt Prec	0.038		
QC 2		Satellites	16	PDOP	1.4	HDOP	0.7	VDOP	1.3
		Base data age	1.2000000476837	RMS	20.258	Positions used	28		
		VCV xx (m²)	0.000039	VCV xy (m²)	0.000012	VCV xz (m²)	-0.000002		
				VCV yy (m²)	0.000185	VCV yz (m²)	-0.000069		
						VCV zz (m²)	0.000072		
Point	1603	ΔX	28917.060	ΔY	40350.434	ΔZ	51887.602	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.021	Vt Prec	0.038		
QC 2		Satellites	15	PDOP	1.4	HDOP	0.7	VDOP	1.3
		Base data age	0.80000001192093	RMS	18.337	Positions used	31		
		VCV xx (m²)	0.000037	VCV xy (m²)	0.000011	VCV xz (m²)	-0.000002		
				VCV yy (m²)	0.000182	VCV yz (m²)	-0.000069		
						VCV zz (m²)	0.000073		

Initialization event: Lost

GPS week	1844	Seconds	247744	Initialization type	On the fly	Survey type	Real-time	Initialization count	5
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Note	New base station detected
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOJC	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1844	Seconds	248604	Initialization type	On the fly	Survey type	Real-time	Initialization count	6
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	1501	ΔX	14623.723	ΔY	51951.791	ΔZ	65621.175	Code	PK
		Method	Fixed	Type	Topo point	Search class	Normal		

Antenna height	5.000	Type	Uncorrected	Hz Prec	0.023	Vt Prec	0.035		
QC 1		Satellites	17	PDOP	1.6	HDOP	0.9	VDOP	1.3
		Base data age	0.60000002384186	RMS	23.003	Positions used	47		
QC 2		VCV xx (m ²)	0.000040	VCV xy (m ²)	0.000008	VCV xz (m ²)	0.000007		
				VCV yy (m ²)	0.000143	VCV yz (m ²)	-0.000064		
						VCV zz (m ²)	0.000086		
Point	1502	ΔX	14588.463	ΔY	51984.297	ΔZ	65655.795	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.024	Vt Prec	0.037		
		Satellites	17	PDOP	1.1	HDOP	0.6	VDOP	1.0
		Base data age	0.60000002384186	RMS	22.579	Positions used	26		
QC 2		VCV xx (m ²)	0.000043	VCV xy (m ²)	0.000007	VCV xz (m ²)	0.000010		
				VCV yy (m ²)	0.000153	VCV yz (m ²)	-0.000071		
						VCV zz (m ²)	0.000101		
Point	1503	ΔX	14594.533	ΔY	52025.053	ΔZ	65701.265	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.026	Vt Prec	0.038		
		Satellites	15	PDOP	1.3	HDOP	0.7	VDOP	1.1
		Base data age	0.80000001192093	RMS	23.301	Positions used	31		
QC 2		VCV xx (m ²)	0.000043	VCV xy (m ²)	-0.000002	VCV xz (m ²)	0.000015		
				VCV yy (m ²)	0.000170	VCV yz (m ²)	-0.000085		
						VCV zz (m ²)	0.000115		

Initialization event: Lost

GPS week	1844	Seconds	249844	Initialization type	On the fly	Survey type	Real-time	Initialization count	6
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Note	New base station detected
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Note	New base station detected
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Note	New base station detected
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Note	New base station detected
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1844	Seconds	251658	Initialization type	On the fly	Survey type	Real-time	Initialization count	7
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Survey event

Survey event	End survey
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Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation mask	10	PDOP mask	6						
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Survey event

Survey event	Rover started
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1844	Seconds	311848	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	901	ΔX	8096.758	ΔY	-8289.394	ΔZ	-9756.874	Code	PK
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.015	Vt Prec	0.019		
QC 2		Satellites	16	PDOP	1.1	HDOP	0.7	VDOP	0.8
		Base data age	1.2000000476837	RMS	12.858	Positions used	35		
		VCV xx (m²)	0.000016	VCV xy (m²)	0.000000	VCV xz (m²)	0.000001		
				VCV yy (m²)	0.000046	VCV yz (m²)	-0.000016		
						VCV zz (m²)	0.000027		
Point	902	ΔX	8223.087	ΔY	-8354.845	ΔZ	-9827.045	Code	PK
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.017	Vt Prec	0.020		
QC 2		Satellites	17	PDOP	1.2	HDOP	0.8	VDOP	1.0
		Base data age	1.3999999761581	RMS	16.288	Positions used	34		
		VCV xx (m²)	0.000021	VCV xy (m²)	0.000002	VCV xz (m²)	0.000001		
				VCV yy (m²)	0.000053	VCV yz (m²)	-0.000019		
						VCV zz (m²)	0.000033		
Point	903	ΔX	8314.583	ΔY	-8330.511	ΔZ	-9793.493	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.017	Vt Prec	0.021		
QC 2		Satellites	16	PDOP	1.2	HDOP	0.7	VDOP	1.0
		Base data age	0.60000002384186	RMS	13.535	Positions used	33		
		VCV xx (m²)	0.000021	VCV xy (m²)	0.000000	VCV xz (m²)	0.000001		
				VCV yy (m²)	0.000058	VCV yz (m²)	-0.000022		
						VCV zz (m²)	0.000035		
Point	904	ΔX	8122.057	ΔY	-8361.636	ΔZ	-9838.839	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.018	Vt Prec	0.023		
QC 2		Satellites	14	PDOP	1.2	HDOP	0.8	VDOP	1.0
		Base data age	1.2000000476837	RMS	12.793	Positions used	32		
		VCV xx (m²)	0.000024	VCV xy (m²)	0.000001	VCV xz (m²)	0.000000		
				VCV yy (m²)	0.000060	VCV yz (m²)	-0.000026		
						VCV zz (m²)	0.000044		

Initialization event: Lost

GPS week	1844	Seconds	313308	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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Initialization event: Gained

GPS week	1844	Seconds	313396	Initialization type	On the fly	Survey type	Real-time	Initialization count	2
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Initialization event: Lost

GPS week	1844	Seconds	313424	Initialization type	On the fly	Survey type	Real-time	Initialization count	2
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Initialization event: Gained

GPS week	1844	Seconds	313431	Initialization type	On the fly	Survey type	Real-time	Initialization count	3
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Initialization event: Lost

GPS week	1844	Seconds	313464	Initialization type	On the fly	Survey type	Real-time	Initialization count	3
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Initialization event: Gained

GPS week	1844	Seconds	313669	Initialization type	On the fly	Survey type	Real-time	Initialization count	4
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Initialization event: Lost

GPS week	1844	Seconds	313674	Initialization type	On the fly	Survey type	Real-time	Initialization count	4
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Note	New base station detected								
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Note	New base station detected								
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Note	New base station detected								
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GNSS receiver

Receiver type	Unknown
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Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1844	Seconds	316941	Initialization type	On the fly	Survey type	Real-time	Initialization count	5
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Note	New base station detected
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Initialization event: Lost

GPS week	1844	Seconds	317364	Initialization type	On the fly	Survey type	Real-time	Initialization count	5
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Initialization event: Gained

GPS week	1844	Seconds	317372	Initialization type	On the fly	Survey type	Real-time	Initialization count	6
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	1401	ΔX	-24798.131	ΔY	-41241.463	ΔZ	-52286.467	Code	PK
		Method	Fixed	Type	Topo point	Search class	Normal		
Antenna height	5.000	Type	Uncorrected	H_z Prec	0.027	V_t Prec	0.045		
QC 1		Satellites	13	PDOP	1.8	HDOP	0.9	VDOP	1.5
QC 2		Base data age	1.2000000476837	RMS	18.461	Positions used	33		
		V_{CV} xx (m²)	0.000045	V_{CV} xy (m²)	0.000021	V_{CV} xz (m²)	-0.000021		
				V_{CV} yy (m²)	0.000197	V_{CV} yz (m²)	-0.000148		
						V_{CV} zz (m²)	0.000178		
Point	1402	ΔX	-24826.269	ΔY	-41234.384	ΔZ	-52282.511	Code	NAIL
		Method	Fixed	Type	Topo point	Search class	Normal		

Antenna height	5.000	Type	Uncorrected	Hz Prec	0.025	Vt Prec	0.043		
QC 1		Satellites	13	PDOP	2.0	HDOP	0.9	VDOP	1.8
QC 2		Base data age	0.80000001192093	RMS	16.211	Positions used	32		
		VCV xx (m²)	0.000044	VCV xy (m²)	0.000020	VCV xz (m²)	-0.000020		
				VCV yy (m²)	0.000183	VCV yz (m²)	-0.000135		
						VCV zz (m²)	0.000162		
Point	1403	ΔX	-24849.046	ΔY	-41217.200	ΔZ	-52266.349	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.023	Vt Prec	0.046		
		Satellites	11	PDOP	2.0	HDOP	0.9	VDOP	1.8
		Base data age	1.2000000476837	RMS	17.869	Positions used	36		
QC 2		VCV xx (m²)	0.000044	VCV xy (m²)	0.000017	VCV xz (m²)	-0.000018		
				VCV yy (m²)	0.000201	VCV yz (m²)	-0.000145		
						VCV zz (m²)	0.000168		

Survey event

Survey event	End survey
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Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation mask	10	PDOP mask	6						
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Survey event

Survey event	Rover started
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1844	Seconds	320769	Initialization type	On the fly	Survey type	Real-time	Initialization count	7
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	1201	ΔX	-1706.977	ΔY	-28144.618	ΔZ	-34857.730	Code	PK
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.024	Vt Prec	0.036		
QC 2		Satellites	16	PDOP	1.2	HDOP	0.7	VDOP	1.0
		Base data age	0.80000001192093	RMS	21.668	Positions used	33		
		VCV xx (m²)	0.000042	VCV xy (m²)	-0.000002	VCV xz (m²)	0.000001		
				VCV yy (m²)	0.000165	VCV yz (m²)	-0.000063		
						VCV zz (m²)	0.000089		

Point	1202	ΔX	-1747.394	ΔY	-28159.226	ΔZ	-34878.055	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.024	Vt Prec	0.035		
QC 2		Satellites	14	PDOP	1.4	HDOP	0.8	VDOP	1.1
		Base data age	1	RMS	19.901	Positions used	32		
		VCV xx (m²)	0.000037	VCV xy (m²)	-0.000002	VCV xz (m²)	0.000000		
				VCV yy (m²)	0.000156	VCV yz (m²)	-0.000060		
						VCV zz (m²)	0.000084		

Point	1203	ΔX	-1737.512	ΔY	-28206.713	ΔZ	-34940.064	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.024	Vt Prec	0.036		
QC 2		Satellites	14	PDOP	1.4	HDOP	0.8	VDOP	1.1
		Base data age	1.2000000476837	RMS	17.838	Positions used	31		
		VCV xx (m²)	0.000037	VCV xy (m²)	-0.000001	VCV xz (m²)	0.000001		
				VCV yy (m²)	0.000164	VCV yz (m²)	-0.000064		
						VCV zz (m²)	0.000094		

Initialization event: Lost

GPS week	1844	Seconds	322424	Initialization type	On the fly	Survey type	Real-time	Initialization count	7
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Note	New base station detected
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1844	Seconds	323878	Initialization type	On the fly	Survey type	Real-time	Initialization count	8
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Initialization event: Lost

GPS week	1844	Seconds	323909	Initialization type	On the fly	Survey type	Real-time	Initialization count	8
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Initialization event: Gained

GPS week	1844	Seconds	323953	Initialization type	On the fly	Survey type	Real-time	Initialization count	9
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	4001	ΔX	17731.640	ΔY	-19167.751	ΔZ	-22745.270	Code	PK
		Method	Fixed	Type	Topo point	Search class	Normal		
Antenna height	5.000	Type	Uncorrected	Hz Prec	0.018	Vt Prec	0.033		
QC 1		Satellites	17	PDOP	1.3	HDOP	0.7	VDOP	1.2
		Base data age	0.80000001192093	RMS	41.551	Positions used	33		
QC 2		VCV xx (m²)	0.000026	VCV xy (m²)	0.000004	VCV xz (m²)	0.000004		
				VCV yy (m²)	0.000116	VCV yz (m²)	-0.000054		
						VCV zz (m²)	0.000075		
Point	4002	ΔX	17667.023	ΔY	-19143.023	ΔZ	-22714.946	Code	NAIL
		Method	Fixed	Type	Topo point	Search class	Normal		
Antenna height	5.000	Type	Uncorrected	Hz Prec	0.024	Vt Prec	0.043		
QC 1		Satellites	15	PDOP	1.8	HDOP	1.2	VDOP	1.4
		Base data age	1.3999999761581	RMS	24.839	Positions used	33		
QC 2		VCV xx (m²)	0.000038	VCV xy (m²)	0.000008	VCV xz (m²)	0.000007		
				VCV yy (m²)	0.000171	VCV yz (m²)	-0.000084		
						VCV zz (m²)	0.000118		
Point	4003	ΔX	17684.999	ΔY	-19194.794	ΔZ	-22781.797	Code	NAIL
		Method	Fixed	Type	Topo point	Search class	Normal		
Antenna height	5.000	Type	Uncorrected	Hz Prec	0.019	Vt Prec	0.035		
QC 1		Satellites	16	PDOP	1.4	HDOP	0.7	VDOP	1.3
		Base data age	0.40000000596046	RMS	20.491	Positions used	33		
QC 2		VCV xx (m²)	0.000028	VCV xy (m²)	0.000003	VCV xz (m²)	0.000004		
				VCV yy (m²)	0.000126	VCV yz (m²)	-0.000063		
						VCV zz (m²)	0.000085		

Initialization event: Lost

GPS week	1844	Seconds	324840	Initialization type	On the fly	Survey type	Real-time	Initialization count	9
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Initialization event: Gained

GPS week	1844	Seconds	324845	Initialization type	On the fly	Survey type	Real-time	Initialization count	10
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Initialization event: Lost

GPS week	1844	Seconds	325315	Initialization type	On the fly	Survey type	Real-time	Initialization count	10
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Note	New base station detected
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Note	New base station detected
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Note	New base station detected
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1844	Seconds	326282	Initialization type	On the fly	Survey type	Real-time	Initialization count	11
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	1101	ΔX	38728.757	ΔY	-26550.451	ΔZ	-30938.977	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	H_z Prec	0.024	Vt Prec	0.041		
QC 2		Satellites	17	PDOP	1.6	HDOP	0.8	VDOP	1.4
		Base data age	9.8000001907349	RMS	19.176	Positions used	52		
		VCV xx (m²)	0.000025	VCV xy (m²)	0.000003	VCV xz (m²)	-0.000003		
				VCV yy (m²)	0.000161	VCV yz (m²)	-0.000122		
						VCV zz (m²)	0.000164		
Point	1102	ΔX	38750.399	ΔY	-26528.417	ΔZ	-30912.477	Code	NAIL
		Method	Fixed	Type	Topo point	Search class	Normal		

Antenna height	5.000	Type	Uncorrected	Hz Prec	0.026	Vt Prec	0.044		
QC 1		Satellites	17	PDOP	1.3	HDOP	0.7	VDOP	1.1
		Base data age	1	RMS	21.909	Positions used	30		
QC 2		VCV xx (m²)	0.000030	VCV xy (m²)	0.000009	VCV xz (m²)	-0.000007		
				VCV yy (m²)	0.000190	VCV yz (m²)	-0.000144		
						VCV zz (m²)	0.000188		

Point	1103	ΔX	38704.651	ΔY	-26505.207	ΔZ	-30881.214	Code	NAIL
		Method	Fixed	Type	Topo point	Search class	Normal		
Antenna height	5.000	Type	Uncorrected	Hz Prec	0.031	Vt Prec	0.052		
QC 1		Satellites	16	PDOP	1.6	HDOP	0.8	VDOP	1.3
		Base data age	0.60000002384186	RMS	21.909	Positions used	32		
QC 2		VCV xx (m²)	0.000032	VCV xy (m²)	0.000013	VCV xz (m²)	-0.000015		
				VCV yy (m²)	0.000226	VCV yz (m²)	-0.000206		
						VCV zz (m²)	0.000310		

Initialization event: Lost

GPS week	1844	Seconds	327058	Initialization type	On the fly	Survey type	Real-time	Initialization count	11
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Initialization event: Gained

GPS week	1844	Seconds	327066	Initialization type	On the fly	Survey type	Real-time	Initialization count	12
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Initialization event: Lost

GPS week	1844	Seconds	327095	Initialization type	On the fly	Survey type	Real-time	Initialization count	12
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Initialization event: Gained

GPS week	1844	Seconds	327218	Initialization type	On the fly	Survey type	Real-time	Initialization count	13
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Initialization event: Lost

GPS week	1844	Seconds	327332	Initialization type	On the fly	Survey type	Real-time	Initialization count	13
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Initialization event: Gained

GPS week	1844	Seconds	327346	Initialization type	On the fly	Survey type	Real-time	Initialization count	14
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Initialization event: Lost

GPS week	1844	Seconds	327444	Initialization type	On the fly	Survey type	Real-time	Initialization count	14
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Note	New base station detected								
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1844	Seconds	328753	Initialization type	On the fly	Survey type	Real-time	Initialization count	15
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	1001	ΔX	34664.910	ΔY	-9819.828	ΔZ	-10367.441	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.015	Vt Prec	0.033		
QC 2		Satellites	14	PDOP	1.5	HDOP	0.7	VDOP	1.4
		Base data age	1	RMS	16.881	Positions used	34		
		VCV xx (m²)	0.000015	VCV xy (m²)	0.000004	VCV xz (m²)	-0.000003		
				VCV yy (m²)	0.000103	VCV yz (m²)	-0.000075		
						VCV zz (m²)	0.000083		
Point	1003	ΔX	34612.961	ΔY	-9814.477	ΔZ	-10361.863	Code	PK
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.018	Vt Prec	0.030		
QC 2		Satellites	16	PDOP	1.3	HDOP	0.6	VDOP	1.1
		Base data age	0.60000002384186	RMS	17.013	Positions used	36		
		VCV xx (m²)	0.000015	VCV xy (m²)	0.000003	VCV xz (m²)	-0.000002		
				VCV yy (m²)	0.000098	VCV yz (m²)	-0.000068		
						VCV zz (m²)	0.000072		
Point	1002	ΔX	34613.664	ΔY	-9790.340	ΔZ	-10330.280	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.014	Vt Prec	0.031		
QC 2		Satellites	15	PDOP	1.4	HDOP	0.7	VDOP	1.3
		Base data age	0.80000001192093	RMS	13.798	Positions used	36		
		VCV xx (m²)	0.000015	VCV xy (m²)	0.000005	VCV xz (m²)	-0.000003		
				VCV yy (m²)	0.000097	VCV yz (m²)	-0.000066		
						VCV zz (m²)	0.000071		

Survey event

Survey event	End survey
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Instrument

Instrument type	Trimble VX/S Series
EDM Refractive Index	273.6
EDM Carrier Wavelength	79.2
Horizontal Circle Mode	Set to azimuth
Horizontal Angle Precision	0°00'03"
Vertical Angle Precision	0°00'03"
EDM precision	2mm +2ppm
Backsight centering error	0.010

Atmosphere

Pressure	30.16inHg	Temperature	75.0°F	ppm	1.4				
Curvature correction	Yes	Refraction correction	Yes	Refraction const.	0.142				

Station setup

Station	1001	Instrument height	5.390	Station type	Station setup	Scale factor	1.00000000	Std Error	?
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Orientation

Station	1001	Backsight point	1003	Orientation correction	-0°00'00"	Orient. Std Err	?		
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Point (B.S.)	1003	HA	276°51'42"	VA	89°24'42"	SD	52.501	Code	PK
Std Errors		HA	0°00'03"	VA	0°00'03"	SD	0.007		
Target height	5.000	Prism constant	10.0mm						
Deltas	1003	Azimuth	?	H.Dist	-0.017	V.Dist	-0.057		
Point	1004	HA	228°57'46"	VA	93°04'38"	SD	74.112	Code	NAIL
Std Errors		HA	0°00'03"	VA	0°00'03"	SD	0.007		
Target height	5.000	Prism constant	10.0mm						

Projection

Projection	Transverse Mercator
Origin lat	35°50'00.00000"N
Origin long	92°30'00.00000"W
False northing	0.000
False easting	1640416.667
Scale	0.99993333
Ellipsoid	Semi-major axis: 20925604.474 Flattening: 298.25722154

Local site

Type	Grid
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Vertical adjustment

Geoid file	G12AUS
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Coordinate system

System	US State Plane 1983
Zone	Missouri Central 2402
Datum	NAD 1983 (Conus)

Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation mask	10	PDOP mask	6						
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Survey event

Survey event	Rover started
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GNSS receiver

Receiver type	NetR9
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOBO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1844	Seconds	481248	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	4101	ΔX	100780.423	ΔY	57304.090	ΔZ	76218.122	Code	PK
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.026	Vt Prec	0.038		
QC 2		Satellites	14	PDOP	1.4	HDOP	0.8	VDOP	1.1
		Base data age	1.2000000476837	RMS	21.015	Positions used	63		
		VCV xx (m²)	0.000045	VCV xy (m²)	-0.000007	VCV xz (m²)	0.000013		
				VCV yy (m²)	0.000169	VCV yz (m²)	-0.000067		
						VCV zz (m²)	0.000111		

Point	4102	ΔX	100782.840	ΔY	57336.343	ΔZ	76258.640	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.025	Vt Prec	0.037		
QC 2		Satellites	14	PDOP	1.4	HDOP	0.8	VDOP	1.1
		Base data age	0.80000001192093	RMS	24.982	Positions used	65		
		VCV xx (m²)	0.000043	VCV xy (m²)	-0.000006	VCV xz (m²)	0.000011		
				VCV yy (m²)	0.000157	VCV yz (m²)	-0.000059		
						VCV zz (m²)	0.000103		

Survey event

Survey event	End survey
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Instrument

Instrument type	Trimble VX/S Series
EDM Refractive Index	273.6
EDM Carrier Wavelength	79.2
Horizontal Circle Mode	Set to azimuth
Horizontal Angle Precision	0°00'03"
Vertical Angle Precision	0°00'03"
EDM precision	2mm +2ppm
Backsight centering error	0.010

Atmosphere

Pressure	30.16inHg	Temperature	75.0°F	ppm	1.4
Curvature correction	Yes	Refraction correction	Yes	Refraction const.	0.142

Station setup

Station	4102	Instrument height	5.180	Station type	Station setup	Scale factor	1.00000000	Std Error	?
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Orientation

Station	4102	Backsight point	4101	Orientation correction	0°00'00"	Orient. Std Err	?		
Point (B.S.)	4101	HA	181°06'49"	VA	90°43'23"	SD	51.830	Code	PK
Std Errors		HA	0°00'03"	VA	0°00'03"	SD	0.007		
Target height	5.000	Prism constant	10.0mm						
Deltas	4101	Azimuth	?	H.Dist	-0.018	V.Dist	-0.083		
Point	4103	HA	220°14'36"	VA	87°51'46"	SD	89.805	Code	NAIL
Std Errors		HA	0°00'03"	VA	0°00'03"	SD	0.007		
Target height	5.000	Prism constant	10.0mm						

Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation mask	10	PDOP mask	6						
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Survey event

Survey event	Rover started
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GNSS receiver

Receiver type	NetR9
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOBO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1844	Seconds	484883	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	101	ΔX	109079.232	ΔY	68783.773	ΔZ	90757.558	Code	PK
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	H_z Prec	0.024	V_t Prec	0.035		
QC 2		Satellites	14	PDOP	1.3	HDOP	0.7	VDOP	1.1
		Base data age	0.80000001192093	RMS	25.874	Positions used	96		
		V_{CV} xx (m²)	0.000049	V_{CV} xy (m²)	-0.000007	V_{CV} xz (m²)	0.000007		

				VCV yy (m²)	0.000134	VCV yz (m²)	-0.000062		
						VCV zz (m²)	0.000090		
Point	102	ΔX	109118.583	ΔY	68800.907	ΔZ	90782.548	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.024	Vt Prec	0.037		
QC 2		Satellites	14	PDOP	1.5	HDOP	0.8	VDOP	1.3
		Base data age	0.40000000596046	RMS	22.786	Positions used	88		
		VCV xx (m²)	0.000053	VCV xy (m²)	-0.000008	VCV xz (m²)	0.000006		
				VCV yy (m²)	0.000150	VCV yz (m²)	-0.000071		
						VCV zz (m²)	0.000095		

Survey event

Survey event	End survey
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Instrument

Instrument type	Trimble VX/S Series
EDM Refractive Index	273.6
EDM Carrier Wavelength	79.2
Horizontal Circle Mode	Set to azimuth
Horizontal Angle Precision	0°00'03"
Vertical Angle Precision	0°00'03"
EDM precision	2mm +2ppm
Backsight centering error	0.010

Atmosphere

Pressure	30.16inHg	Temperature	75.0°F	ppm	1.4				
Curvature correction	Yes	Refraction correction	Yes	Refraction const.	0.142				

Station setup

Station	102	Instrument height	5.340	Station type	Station setup	Scale factor	1.00000000	Std Error	?
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Orientation

Station	102	Backsight point	101	Orientation correction	0°00'00"	Orient. Std Err	?		
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Point (B.S.)	101	HA	230°57'50"	VA	91°53'30"	SD	49.613	Code	PK
Std Errors		HA	0°00'03"	VA	0°00'03"	SD	0.007		
Target height	5.000	Prism constant	10.0mm						
Deltas	101	Azimuth	?	H.Distance	0.028	V.Distance	0.022		
Point	103	HA	265°12'56"	VA	92°46'43"	SD	84.284	Code	NAIL
Std Errors		HA	0°00'03"	VA	0°00'03"	SD	0.007		
Target height	5.000	Prism constant	10.0mm						

Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation mask	10	PDOP mask	6						
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Survey event

Survey event	Rover started
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOMC	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1844	Seconds	488555	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	2201	ΔX	-142236.264	ΔY	12957.397	ΔZ	9621.083	Code	PK
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.033	Vt Prec	0.054	VDOP	1.4
QC 2		Satellites	12	PDOP	1.6	HDOP	0.9		
		Base data age	1.2000000476837	RMS	25.675	Positions used	75		
		VCV xx (m²)	0.000052	VCV xy (m²)	0.000023	VCV xz (m²)	-0.000022		
				VCV yy (m²)	0.000310	VCV yz (m²)	-0.000244		
						VCV zz (m²)	0.000268		

Point	2202	ΔX	-142212.126	ΔY	12933.732	ΔZ	9592.533	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.033	Vt Prec	0.054	VDOP	1.4
QC 2		Satellites	12	PDOP	1.6	HDOP	0.9		
		Base data age	0.80000001192093	RMS	28.673	Positions used	65		
		VCV xx (m²)	0.000052	VCV xy (m²)	0.000021	VCV xz (m²)	-0.000019		
				VCV yy (m²)	0.000308	VCV yz (m²)	-0.000239		
						VCV zz (m²)	0.000264		

Point	2203	ΔX	-142289.084	ΔY	13005.067	ΔZ	9675.544	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.036	Vt Prec	0.055	VDOP	2.0
QC 2		Satellites	11	PDOP	2.3	HDOP	1.1		
		Base data age	0.60000002384186	RMS	24.618	Positions used	85		
		VCV xx (m²)	0.000058	VCV xy (m²)	-0.000005	VCV xz (m²)	-0.000012		
				VCV yy (m²)	0.000352	VCV yz (m²)	-0.000240		
						VCV zz (m²)	0.000247		

Survey event

Survey event	End survey
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Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation mask	10	PDOP mask	6						
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Survey event

Survey event	Rover started
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOMC	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1844	Seconds	490724	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	5008	ΔX Method	-127590.133 Fixed	ΔY Type	21220.474 Topo point	ΔZ Search class	20450.146 Normal	Code	PK
Antenna height	5.000	Type	Uncorrected	Hz Prec	0.026	Vt Prec	0.042		
QC 1		Satellites	14	PDOP	1.5	HDOP	0.8	VDOP	1.3
QC 2		Base data age	0.60000002384186	RMS	23.484	Positions used	65		
		VCV xx (m²)	0.000049	VCV xy (m²)	0.000017	VCV xz (m²)	-0.000020		
				VCV yy (m²)	0.000177	VCV yz (m²)	-0.000112		
						VCV zz (m²)	0.000148		
Point	5010	ΔX Method	-127523.077 Fixed	ΔY Type	21177.271 Topo point	ΔZ Search class	20401.681 Normal	Code	NAIL
Antenna height	5.000	Type	Uncorrected	Hz Prec	0.026	Vt Prec	0.041		
QC 1		Satellites	14	PDOP	1.4	HDOP	0.8	VDOP	1.2
QC 2		Base data age	0.80000001192093	RMS	24.847	Positions used	66		
		VCV xx (m²)	0.000049	VCV xy (m²)	0.000014	VCV xz (m²)	-0.000017		
				VCV yy (m²)	0.000171	VCV yz (m²)	-0.000103		
						VCV zz (m²)	0.000135		
Point	5009	ΔX Method	-127621.893 Fixed	ΔY Type	21112.109 Topo point	ΔZ Search class	20319.005 Normal	Code	PK

Antenna height	5.000	Type	Uncorrected	H_z Prec	0.026	V_t Prec	0.041		
QC 1		Satellites	14	PDOP	1.4	HDOP	0.8	VDOP	1.2
		Base data age	1	RMS	23.413	Positions used	64		
QC 2		VCV xx (m²)	0.000051	VCV xy (m²)	0.000013	VCV xz (m²)	-0.000019		
				VCV yy (m²)	0.000176	VCV yz (m²)	-0.000102		
						VCV zz (m²)	0.000139		
Point	5011	ΔX	-127694.125	ΔY	21140.883	ΔZ	20351.757	Code	NAIL
		Method	Fixed	Type	Topo point	Search class	Normal		
Antenna height	5.000	Type	Uncorrected	H_z Prec	0.025	V_t Prec	0.039		
QC 1		Satellites	15	PDOP	1.3	HDOP	0.7	VDOP	1.1
		Base data age	1	RMS	26.208	Positions used	65		
QC 2		VCV xx (m²)	0.000048	VCV xy (m²)	0.000008	VCV xz (m²)	-0.000011		
				VCV yy (m²)	0.000163	VCV yz (m²)	-0.000084		
						VCV zz (m²)	0.000111		

Survey event

Survey event	End survey
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Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation mask	10	PDOP mask	6						
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Survey event

Survey event	Rover started
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GNSS receiver

Receiver type	NetR9
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOBO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1845	Seconds	134012	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	601	ΔX	86619.621	ΔY	42627.755	ΔZ	57398.332	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.027	Vt Prec	0.038		
QC 2		Satellites	14	PDOP	1.5	HDOP	0.8	VDOP	1.3
		Base data age	1.2000000476837	RMS	21.061	Positions used	91		
		VCV xx (m²)	0.000029	VCV xy (m²)	0.000005	VCV xz (m²)	-0.000001		
				VCV yy (m²)	0.000165	VCV yz (m²)	-0.000104		
						VCV zz (m²)	0.000142		

Survey event

Survey event	End survey
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Instrument

Instrument type	Trimble VX/S Series
EDM Refractive Index	273.6
EDM Carrier Wavelength	79.2
Horizontal Circle Mode	Set to azimuth
Horizontal Angle Precision	0°00'03"
Vertical Angle Precision	0°00'03"
EDM precision	2mm +2ppm
Backsight centering error	0.010

Atmosphere

Pressure	30.16inHg	Temperature	70.0°F	ppm	-1.1				
Curvature correction	Yes	Refraction correction	Yes	Refraction const.	0.142				

Station setup

Station	601	Instrument height	5.470	Station type	Station setup	Scale factor	1.00000000	Std Error	?
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Orientation

Station	601	Backsight point	602	Orientation correction	0°00'00"	Orient. Std Err	?		
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Point (B.S.)	602	HA	24°09'09"	VA	89°30'46"	SD	57.017	Code	NAIL
Std Errors		HA	0°00'03"	VA	0°00'03"	SD	0.007		
Target height	5.000	Prism constant	10.0mm						
Deltas	602	Azimuth	?	H.Dist	-0.005	V.Dist	-0.031		
Point	603	HA	260°02'58"	VA	92°23'11"	SD	87.329	Code	NAIL
Std Errors		HA	0°00'03"	VA	0°00'03"	SD	0.007		
Target height	5.000	Prism constant	10.0mm						

Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation	10	PDOP mask	6						
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mask									
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Survey event

Survey event	Rover started
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GNSS receiver

Receiver type	NetR9
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOBO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1845	Seconds	137385	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Survey event

Survey event	End survey
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Instrument

Instrument type	Trimble VX/S Series
EDM Refractive Index	273.6
EDM Carrier Wavelength	79.2
Horizontal Circle Mode	Set to azimuth
Horizontal Angle Precision	0°00'03"
Vertical Angle Precision	0°00'03"
EDM precision	2mm +2ppm
Backsight centering error	0.010

Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation mask	10	PDOP mask	6						
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Survey event

Survey event	Rover started
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GNSS receiver

Receiver type	NetR9
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOBO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1845	Seconds	138518	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	2002	ΔX	90463.819	ΔY	25800.163	ΔZ	36836.964	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Ht Prec	0.022	Vt Prec	0.032		
QC 2		Satellites	15	PDOP	1.3	HDOP	0.8	VDOP	1.1
		Base data age	1.2000000476837	RMS	22.012	Positions used	63		
		VCV xx (m²)	0.000044	VCV xy (m²)	0.000003	VCV xz (m²)	0.000001		
				VCV yy (m²)	0.000118	VCV yz (m²)	-0.000048		
						VCV zz (m²)	0.000078		

Survey event

Survey event	End survey
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Instrument

Instrument type	Trimble VX/S Series
EDM Refractive Index	273.6
EDM Carrier Wavelength	79.2
Horizontal Circle Mode	Set to azimuth
Horizontal Angle Precision	0°00'03"
Vertical Angle Precision	0°00'03"
EDM precision	2mm +2ppm
Backsight centering error	0.010

Note	Used last station setup
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Instrument

Instrument type	Trimble VX/S Series
EDM Refractive Index	273.6
EDM Carrier Wavelength	79.2
Horizontal Circle Mode	Set to azimuth
Horizontal Angle Precision	0°00'03"
Vertical Angle Precision	0°00'03"
EDM precision	2mm +2ppm

Backsight centering error	0.010
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Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation mask	10	PDOP mask	6						
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Survey event

Survey event	Rover started
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GNSS receiver

Receiver type	NetR9
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOBO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1845	Seconds	138888	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	2001	ΔX	90498.413	ΔY	25808.623	ΔZ	36846.125	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	H_z Prec	0.025	V_t Prec	0.034		
QC 2		Satellites	13	PDOP	1.6	HDOP	1.0	VDOP	1.3
		Base data age	1.2000000476837	RMS	20.251	Positions used	130		
		V_{CV} xx (m²)	0.000052	V_{CV} xy (m²)	0.000034	V_{CV} xz (m²)	-0.000011		
				V_{CV} yy (m²)	0.000149	V_{CV} yz (m²)	-0.000064		
						V_{CV} zz (m²)	0.000083		

Survey event

Survey event	End survey
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Instrument

Instrument type	Trimble VX/S Series
EDM Refractive Index	273.6
EDM Carrier Wavelength	79.2
Horizontal Circle Mode	Set to azimuth

Horizontal Angle Precision	0°00'03"
Vertical Angle Precision	0°00'03"
EDM precision	2mm +2ppm
Backsight centering error	0.010

Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation mask	10	PDOP mask	6						
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Survey event

Survey event	Rover started
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GNSS receiver

Receiver type	NetR9
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOBO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1845	Seconds	139786	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	2004	ΔX Method	90367.009 Fixed	ΔY Type	25825.661 Topo point	ΔZ Search class	36871.291 Normal	Code	PK
Antenna height	5.000	Type	Uncorrected	H_z Prec	0.032	V_t Prec	0.043		
QC 1		Satellites	11	PDOP	1.7	HDOP	1.0	VDOP	1.4
		Base data age	1.2000000476837	RMS	29.902	Positions used	42		
QC 2		V_{CV} xx (m²)	0.000084	V_{CV} xy (m²)	0.000024	V_{CV} xz (m²)	0.000037		
				V_{CV} yy (m²)	0.000184	V_{CV} yz (m²)	-0.000105		
						V_{CV} zz (m²)	0.000182		

Warnings (2004)	Poor precision
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Survey event

Survey event	End survey
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Instrument

Instrument type	Trimble VX/S Series
EDM Refractive Index	273.6
EDM Carrier Wavelength	79.2
Horizontal Circle Mode	Set to azimuth
Horizontal Angle Precision	0°00'03"
Vertical Angle Precision	0°00'03"
EDM precision	2mm +2ppm
Backsight centering error	0.010

Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation mask	10	PDOP mask	6						
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Survey event

Survey event	Rover started
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GNSS receiver

Receiver type	NetR9
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOBO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1845	Seconds	140341	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	2003	ΔX	90358.202	ΔY	25873.219	ΔZ	36922.060	Code	NAIL
		Method	Fixed	Type	Topo point	Search class	Normal		
Antenna height	5.000	Type	Uncorrected	Hz Prec	0.030	Vt Prec	0.051		
QC 1		Satellites	11	PDOP	1.9	HDOP	1.0	VDOP	1.6
		Base data age	0.40000000596046	RMS	34.255	Positions used	120		
QC 2		VCV xx (m²)	0.000053	VCV xy (m²)	0.000023	VCV xz (m²)	-0.000011		
				VCV yy (m²)	0.000278	VCV yz (m²)	-0.000200		
						VCV zz (m²)	0.000216		

Survey event

Survey event	End survey
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Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation mask	10	PDOP mask	6						
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Survey event

Survey event	Rover started
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GNSS receiver

Receiver type	NetR9
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOBO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1845	Seconds	143908	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	5012	ΔX	125242.554	ΔY	24869.954	ΔZ	37640.788	Code	MON BO Hinton
		Method	Fixed	Type	Observed control point	Search class	Normal		
Antenna height	5.000	Type	Uncorrected	Hz Prec	0.023	Vt Prec	0.041		
QC 1		Satellites	13	PDOP	1.7	HDOP	0.8	VDOP	1.4
		Base data age	0.80000001192093	RMS	24.633	Positions used	181		
QC 2		VCV xx (m²)	0.000050	VCV xy (m²)	0.000031	VCV xz (m²)	-0.000040		
				VCV yy (m²)	0.000144	VCV yz (m²)	-0.000108		
						VCV zz (m²)	0.000144		
Point	5013	ΔX	125207.704	ΔY	24799.471	ΔZ	37547.478	Code	MON BO Hinton RM2
		Method	Fixed	Type	Observed control point	Search class	Normal		
Antenna height	5.000	Type	Uncorrected	Hz Prec	0.026	Vt Prec	0.044		
QC 1		Satellites	13	PDOP	1.6	HDOP	0.8	VDOP	1.4

QC 2	Base data age	0.40000000596046	RMS	23.243	Positions used	184		
	VCV xx (m²)	0.000071	VCV xy (m²)	0.000033	VCV xz (m²)	-0.000075		
			VCV yy (m²)	0.000137	VCV yz (m²)	-0.000112		
					VCV zz (m²)	0.000196		

Survey event

Survey event	End survey
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Rover options

Elevation mask	10	PDOP mask	6					
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Rover options

Elevation mask	10	PDOP mask	6					
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Survey event

Survey event	Rover started
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOMC	Antenna height	0.000	Type	Corrected			
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Initialization event: Gained

GPS week	1845	Seconds	146615	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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Initialization event: High RMS

GPS week	1845	Seconds	146779	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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Initialization event: Good RMS

GPS week	1845	Seconds	146780	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	501	ΔX Method	-142275.742 Fixed	ΔY Type	-4448.363 Topo point	ΔZ Search class	-11899.216 Normal	Code	PK
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Antenna height	5.000	Type	Uncorrected	Hz Prec	0.023	Vt Prec	0.038		
QC 1		Satellites	15	PDOP	1.6	HDOP	0.8	VDOP	1.4
QC 2		Base data age	1.2000000476837	RMS	24.536	Positions used	91		
		VCV xx (m²)	0.000043	VCV xy (m²)	-0.000006	VCV xz (m²)	-0.000002		
				VCV yy (m²)	0.000167	VCV yz (m²)	-0.000068		
						VCV zz (m²)	0.000089		
Point	502	ΔX	-142240.950	ΔY	-4487.608	ΔZ	-11946.424	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.024	Vt Prec	0.037	VDOP	1.4
QC 2		Satellites	15	PDOP	1.6	HDOP	0.8		
		Base data age	0.60000002384186	RMS	25.865	Positions used	91		
		VCV xx (m²)	0.000042	VCV xy (m²)	-0.000001	VCV xz (m²)	-0.000003		
				VCV yy (m²)	0.000169	VCV yz (m²)	-0.000066		
						VCV zz (m²)	0.000086		
Point	503	ΔX	-142079.354	ΔY	-4398.805	ΔZ	-11824.653	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.030	Vt Prec	0.045	VDOP	1.1
QC 2		Satellites	16	PDOP	1.3	HDOP	0.7		
		Base data age	0.80000001192093	RMS	25.557	Positions used	93		
		VCV xx (m²)	0.000072	VCV xy (m²)	0.000052	VCV xz (m²)	-0.000043		
				VCV yy (m²)	0.000239	VCV yz (m²)	-0.000120		
						VCV zz (m²)	0.000133		

Survey event

Survey event	End survey
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Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation mask	10	PDOP mask	6						
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Survey event

Survey event	Rover started
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOMC	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1845	Seconds	148733	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	2901	ΔX	-111317.576	ΔY	-6448.132	ΔZ	-12611.583	Code	PK
		Method	Fixed	Type	Topo point	Search class	Normal		
Antenna height	5.000	Type	Uncorrected	H_z Prec	0.024	V_t Prec	0.037		
QC 1		Satellites	16	PDOP	1.2	HDOP	0.6	VDOP	1.0
		Base data age	1.2000000476837	RMS	22.488	Positions used	61		
QC 2		VCV xx (m²)	0.000042	VCV xy (m²)	0.000006	VCV xz (m²)	-0.000002		
				VCV yy (m²)	0.000168	VCV yz (m²)	-0.000065		
						VCV zz (m²)	0.000090		

Initialization event: Lost

GPS week	1845	Seconds	148999	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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Note	New base station detected
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOMC	Antenna height	0.000	Type	Corrected				
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Note	New base station detected
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOMC	Antenna height	0.000	Type	Corrected				
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Note	New base station detected
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External

Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOMC	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1845	Seconds	150291	Initialization type	On the fly	Survey type	Real-time	Initialization count	2
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	401	ΔX	-83512.162	ΔY	-17917.277	ΔZ	-25428.918	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.021	Vt Prec	0.038		
QC 2		Satellites	17	PDOP	1.4	HDOP	0.7	VDOP	1.2
		Base data age	0.60000002384186	RMS	18.315	Positions used	34		
		VCV xx (m²)	0.000035	VCV xy (m²)	0.000005	VCV xz (m²)	0.000005		
				VCV yy (m²)	0.000154	VCV yz (m²)	-0.000072		
						VCV zz (m²)	0.000100		

Point	402	ΔX	-83512.884	ΔY	-17900.607	ΔZ	-25407.075	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.021	Vt Prec	0.038		
QC 2		Satellites	17	PDOP	1.3	HDOP	0.6	VDOP	1.2
		Base data age	0.60000002384186	RMS	22.227	Positions used	30		
		VCV xx (m²)	0.000035	VCV xy (m²)	0.000004	VCV xz (m²)	0.000005		
				VCV yy (m²)	0.000154	VCV yz (m²)	-0.000074		
						VCV zz (m²)	0.000106		

Point	403	ΔX	-83555.596	ΔY	-17924.455	ΔZ	-25436.432	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.022	Vt Prec	0.040		
QC 2		Satellites	16	PDOP	1.6	HDOP	0.8	VDOP	1.4
		Base data age	0.40000000596046	RMS	19.543	Positions used	32		
		VCV xx (m²)	0.000035	VCV xy (m²)	0.000002	VCV xz (m²)	0.000013		
				VCV yy (m²)	0.000153	VCV yz (m²)	-0.000085		
						VCV zz (m²)	0.000140		

Initialization event: High RMS

GPS week	1845	Seconds	151015	Initialization type	On the fly	Survey type	Real-time	Initialization count	2
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Initialization event: Good RMS

GPS week	1845	Seconds	151018	Initialization type	On the fly	Survey type	Real-time	Initialization count	2
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Initialization event: Failed

GPS week	1845	Seconds	151070	Initialization type	On the fly	Survey type	Real-time	Initialization count	2
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Note	New base station detected
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOMC	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1845	Seconds	152089	Initialization type	On the fly	Survey type	Real-time	Initialization count	3
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	1901	ΔX	-115830.098	ΔY	-22256.234	ΔZ	-32381.734	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.027	Vt Prec	0.054	VDOP	1.7
QC 2		Satellites	13	PDOP	1.9	HDOP	0.9		
		Base data age	0.40000000596046	RMS	22.893	Positions used	63		
		VCV xx (m²)	0.000037	VCV xy (m²)	-0.000015	VCV xz (m²)	0.000022		
				VCV yy (m²)	0.000268	VCV yz (m²)	-0.000204		
						VCV zz (m²)	0.000257		

Point	1902	ΔX	-115881.908	ΔY	-22248.667	ΔZ	-32370.991	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.027	Vt Prec	0.055	VDOP	1.8
QC 2		Satellites	14	PDOP	2.0	HDOP	0.9		
		Base data age	1.2000000476837	RMS	23.245	Positions used	66		
		VCV xx (m²)	0.000035	VCV xy (m²)	-0.000017	VCV xz (m²)	0.000021		
				VCV yy (m²)	0.000282	VCV yz (m²)	-0.000211		
						VCV zz (m²)	0.000258		

Point	1903	ΔX	-115781.507	ΔY	-22242.360	ΔZ	-32361.158	Code	NAIL
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.029	Vt Prec	0.049	VDOP	1.7
QC 2		Satellites	15	PDOP	1.9	HDOP	0.8		
		Base data age	0.80000001192093	RMS	33.987	Positions used	118		
		VCV xx (m²)	0.000033	VCV xy (m²)	0.000005	VCV xz (m²)	0.000001		
				VCV yy (m²)	0.000235	VCV yz (m²)	-0.000179		
						VCV zz (m²)	0.000233		

Initialization event: Lost

GPS week	1845	Seconds	153161	Initialization type	On the fly	Survey type	Real-time	Initialization count	3
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Initialization event: Gained

GPS week	1845	Seconds	153839	Initialization type	On the fly	Survey type	Real-time	Initialization count	4
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Point	4301	ΔX	-126666.624	ΔY	-29158.754	ΔZ	-41409.325	Code	PK
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.029	Vt Prec	0.053		
QC 2		Satellites	16	PDOP	1.4	HDOP	0.7	VDOP	1.2
		Base data age	0.40000000596046	RMS	31.324	Positions used	61		
		VCV xx (m²)	0.000039	VCV xy (m²)	0.000018	VCV xz (m²)	-0.000013		
				VCV yy (m²)	0.000276	VCV yz (m²)	-0.000212		
						VCV zz (m²)	0.000257		

Initialization event: Lost

GPS week	1845	Seconds	154180	Initialization type	On the fly	Survey type	Real-time	Initialization count	4
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Note	New base station detected								
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOMC	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1845	Seconds	155301	Initialization type	On the fly	Survey type	Real-time	Initialization count	5
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	3801	ΔX	-132494.823	ΔY	-36515.596	ΔZ	-50860.872	Code	PK
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.030	Vt Prec	0.053		
QC 2		Satellites	17	PDOP	1.4	HDOP	0.7	VDOP	1.2
		Base data age	0.60000002384186	RMS	29.754	Positions used	35		
		VCV xx (m²)	0.000048	VCV xy (m²)	0.000026	VCV xz (m²)	-0.000022		
				VCV yy (m²)	0.000289	VCV yz (m²)	-0.000208		
						VCV zz (m²)	0.000240		

Initialization event: Lost

GPS week	1845	Seconds	155487	Initialization type	On the fly	Survey type	Real-time	Initialization count	5
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Initialization event: Gained

GPS week	1845	Seconds	155990	Initialization type	On the fly	Survey type	Real-time	Initialization count	6
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Point	3501	ΔX	-122575.816	ΔY	-35929.428	ΔZ	-49613.261	Code	DH ?
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.024	Vt Prec	0.045	VDOP	1.3
QC 2		Satellites	15	PDOP	1.5	HDOP	0.7		
		Base data age	1	RMS	23.006	Positions used	71		
		VCV xx (m²)	0.000040	VCV xy (m²)	0.000016	VCV xz (m²)	-0.000010		
				VCV yy (m²)	0.000221	VCV yz (m²)	-0.000136		
						VCV zz (m²)	0.000145		

Initialization event: Lost

GPS week	1845	Seconds	156280	Initialization type	On the fly	Survey type	Real-time	Initialization count	6
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Note	New base station detected								
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GNSS receiver

Receiver type	NetR9								
Serial number	0								
Firmware version	Unknown External								
Antenna type	Antenna Phase Center								
Measurement method	0.000								
Tape adjustment	0.000								
Horizontal offset	0.000								
Vertical offset	0.000								

Base point

Point	MOBO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1845	Seconds	157432	Initialization type	On the fly	Survey type	Real-time	Initialization count	7
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GNSS receiver

Receiver type	R6-2								
Serial number	5134471273								
Firmware version	4.19								
Antenna type	R6-2 Internal								
Measurement method	Bottom of antenna mount								
Tape adjustment	0.000								
Horizontal offset	0.000								
Vertical offset	0.213								

Point	3001	ΔX	130540.816	ΔY	13859.641	ΔZ	24313.918	Code	PK
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.025	Vt Prec	0.049	VDOP	1.4
QC 2		Satellites	15	PDOP	1.6	HDOP	0.7		
		Base data age	0.80000001192093	RMS	23.025	Positions used	36		
		VCV xx (m²)	0.000055	VCV xy (m²)	0.000032	VCV xz (m²)	-0.000018		
				VCV yy (m²)	0.000289	VCV yz (m²)	-0.000135		
						VCV zz (m²)	0.000125		

Initialization event: Lost

GPS week	1845	Seconds	157761	Initialization type	On the fly	Survey type	Real-time	Initialization count	7
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Initialization event: Gained

GPS week	1845	Seconds	158114	Initialization type	On the fly	Survey type	Real-time	Initialization count	8
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Point	2401	ΔX	129600.219	ΔY	8303.762	ΔZ	17321.110	Code	PK
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.028	Vt Prec	0.051		
QC 2		Satellites	17	PDOP	1.4	HDOP	0.7	VDOP	1.2
		Base data age	0.40000000596046	RMS	28.929	Positions used	35		
		VCV xx (m²)	0.000062	VCV xy (m²)	0.000028	VCV xz (m²)	-0.000010		
				VCV yy (m²)	0.000312	VCV yz (m²)	-0.000124		
						VCV zz (m²)	0.000120		

Survey event

Survey event	End survey
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Rover options

Elevation mask	10	PDOP mask	6						
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Rover options

Elevation mask	10	PDOP mask	6						
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Survey event

Survey event	Rover started
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Initialization event: Gained

GPS week	1845	Seconds	411179	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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Note	New base station detected
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GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	Unknown External
Measurement method	Antenna Phase Center
Tape adjustment	0.000

Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	MOCO	Antenna height	0.000	Type	Corrected				
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Initialization event: Lost

GPS week	1845	Seconds	411275	Initialization type	On the fly	Survey type	Real-time	Initialization count	1
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Initialization event: Gained

GPS week	1845	Seconds	411282	Initialization type	On the fly	Survey type	Real-time	Initialization count	2
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GNSS receiver

Receiver type	R6-2
Serial number	5134471273
Firmware version	4.19
Antenna type	R6-2 Internal
Measurement method	Bottom of antenna mount
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.213

Point	5014	ΔX	-46587.528	ΔY	-22195.299	ΔZ	-30158.973	Code	MON BO41 SEcond Shot
Antenna height	5.000	Method	Fixed	Type	Observed control point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.017	Vt Prec	0.029	VDOP	1.1
QC 2		Satellites	17	PDOP	1.3	HDOP	0.7		
		Base data age	0.40000000596046	RMS	23.242	Positions used	190		
		VCV xx (m²)	0.000013	VCV xy (m²)	0.000004	VCV xz (m²)	-0.000003		
				VCV yy (m²)	0.000080	VCV yz (m²)	-0.000060		
						VCV zz (m²)	0.000080		
Point	5015	ΔX	-46587.507	ΔY	-22195.225	ΔZ	-30159.002	Code	MON BO41 Third Shot
Antenna height	5.000	Method	Fixed	Type	Topo point	Search class	Normal		
QC 1		Type	Uncorrected	Hz Prec	0.022	Vt Prec	0.039	VDOP	1.1
QC 2		Satellites	17	PDOP	1.3	HDOP	0.7		
		Base data age	0.80000001192093	RMS	19.870	Positions used	33		
		VCV xx (m²)	0.000022	VCV xy (m²)	0.000006	VCV xz (m²)	-0.000004		
				VCV yy (m²)	0.000140	VCV yz (m²)	-0.000109		
						VCV zz (m²)	0.000146		

Survey event

Survey event	End survey
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Projection

Projection	Transverse Mercator
Origin lat	35°50'00.00000"N
Origin long	92°30'00.00000"W
False northing	0.000
False easting	1640416.667
Scale	0.99993333
Ellipsoid	Semi-major axis: 20925604.474 Flattening: 298.25722154

Local site

Type	Grid
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Coordinate system

System	US State Plane 1983
Zone	Missouri Central 2402
Datum	NAD 1983 (Conus)

Corrections

South azimuth (grid)	No
Grid coords	Increase North-East
Magnetic declination	0°00'00"
Distances	Grid
Neighborhood adjustment	Off

Projection

Projection	Transverse Mercator
Origin lat	35°50'00.00000"N
Origin long	92°30'00.00000"W
False northing	0.000
False easting	1640416.667
Scale	0.99993333
Ellipsoid	Semi-major axis: 20925604.474 Flattening: 298.25722154

Local site

Type	Grid
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Coordinate system

System	US State Plane 1983
Zone	Missouri Central 2402
Datum	NAD 1983 (Conus)

Projection

Projection	Transverse Mercator
Origin lat	35°50'00.00000"N
Origin long	92°30'00.00000"W
False northing	0.000
False easting	1640416.667
Scale	0.99993333
Ellipsoid	Semi-major axis: 20925604.474 Flattening: 298.25722154

Local site

Type	Grid
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Coordinate system

System	US State Plane 1983
Zone	Missouri Central 2402
Datum	NAD 1983 (Conus)

Survey Controller Reduced Points

Point	1	North	1244834.537	East	1667083.832	Elevation	0.000	Code	CALC GPS LOCATION
Point	2	North	1238696.980	East	1704185.842	Elevation	0.000	Code	CALC GPS LOCATION
Point	3	North	1224618.882	East	1752149.414	Elevation	0.000	Code	CALC GPS LOCATION
Point	4	North	1179302.111	East	1747890.110	Elevation	0.000	Code	CALC GPS

									LOCATION
Point	5	North	1196683.821	East	1688658.154	Elevation	0.000	Code	CALC GPS LOCATION
Point	6	North	1201850.637	East	1645780.054	Elevation	0.000	Code	CALC GPS LOCATION
Point	7	North	1141808.060	East	1630554.518	Elevation	0.000	Code	CALC GPS LOCATION
Point	8	North	1141560.926	East	1666999.145	Elevation	0.000	Code	CALC GPS LOCATION
Point	9	North	1137642.655	East	1710075.040	Elevation	0.000	Code	CALC GPS LOCATION
Point	10	North	1136951.064	East	1736659.922	Elevation	0.000	Code	CALC GPS LOCATION
Point	11	North	1110551.497	East	1741459.443	Elevation	0.000	Code	CALC GPS LOCATION
Point	12	North	1105381.791	East	1701123.593	Elevation	0.000	Code	CALC GPS LOCATION
Point	13	North	1111450.779	East	1657895.033	Elevation	0.000	Code	CALC GPS LOCATION
Point	14	North	1082954.819	East	1678638.652	Elevation	0.000	Code	CALC GPS LOCATION
Point	15	North	1084070.619	East	1711446.504	Elevation	0.000	Code	CALC GPS LOCATION
Point	16	North	1065089.584	East	1732704.118	Elevation	0.000	Code	CALC GPS LOCATION
Point	17	North	1056179.084	East	1681898.538	Elevation	0.000	Code	CALC GPS LOCATION
Point	18	North	1033485.915	East	1715488.941	Elevation	0.000	Code	CALC GPS LOCATION
Point	19	North	1170297.305	East	1715806.033	Elevation	0.000	Code	CALC GPS LOCATION
Point	20	North	1175421.474	East	1650377.039	Elevation	0.000	Code	CALC GPS LOCATION
Point	21	North	1217522.209	East	1725045.274	Elevation	0.000	Code	CALC GPS LOCATION
Point	22	North	1224355.981	East	1687891.630	Elevation	0.000	Code	CALC GPS LOCATION
Point	23	North	1119579.108	East	1686949.357	Elevation	0.000	Code	CALC GPS LOCATION
Point	24	North	1150307.793	East	1690214.174	Elevation	0.000	Code	CALC GPS LOCATION
Point	25	North	1139983.227	East	1676794.331	Elevation	0.000	Code	CALC GPS LOCATION
Point	26	North	1071680.498	East	1711333.778	Elevation	0.000	Code	CALC GPS LOCATION
Point	27	North	1041743.776	East	1694757.145	Elevation	0.000	Code	CALC GPS LOCATION
Point	28	North	1230694.122	East	1742823.685	Elevation	0.000	Code	CALC GPS LOCATION
Point	29	North	1195708.169	East	1719627.618	Elevation	0.000	Code	CALC GPS LOCATION
Point	30	North	1159262.622	East	1690909.590	Elevation	0.000	Code	CALC GPS LOCATION
Point	31	North	1121195.956	East	1697940.086	Elevation	0.000	Code	CALC GPS LOCATION
Point	32	North	1129061.097	East	1668049.492	Elevation	0.000	Code	CALC GPS LOCATION
Point	33	North	1119908.301	East	1681607.900	Elevation	0.000	Code	CALC GPS LOCATION
Point	34	North	1140827.769	East	1684669.237	Elevation	0.000	Code	CALC GPS LOCATION
Point	35	North	1148111.896	East	1709667.655	Elevation	0.000	Code	CALC GPS LOCATION
Point	36	North	1129193.840	East	1689324.323	Elevation	0.000	Code	CALC GPS LOCATION
Point	37	North	1135367.470	East	1692594.981	Elevation	0.000	Code	CALC GPS LOCATION
Point	38	North	1146500.291	East	1699780.388	Elevation	0.000	Code	CALC GPS LOCATION
Point	39	North	1154352.982	East	1646102.074	Elevation	0.000	Code	CALC GPS

									LOCATION
Point	40	North	1120987.258	East	1720154.491	Elevation	0.000	Code	CALC GPS LOCATION
Point	41	North	1226102.779	East	1659282.030	Elevation	0.000	Code	CALC GPS LOCATION
Point	42	North	1226547.923	East	1743265.264	Elevation	0.000	Code	CALC GPS LOCATION
Point	43	North	1158631.066	East	1705284.482	Elevation	0.000	Code	CALC GPS LOCATION
Point	44	North	1067256.432	East	1708054.192	Elevation	0.000	Code	CALC GPS LOCATION
Point	MOBO	North	1128071.994	East	1561109.992	Elevation	785.606	Code	
Point	701	North	1141807.555	East	1630554.501	Elevation	739.862	Code	ASPH
Point	702	North	1141876.143	East	1630524.514	Elevation	739.765	Code	GS
Point	703	North	1141889.448	East	1630599.812	Elevation	733.182	Code	EDW
Point	MOCO	North	1150225.784	East	1701611.662	Elevation	788.777	Code	
Point	3901	North	1154337.578	East	1646100.514	Elevation	775.824	Code	PK IN ASPH
Point	3902	North	1154399.548	East	1646127.491	Elevation	771.478	Code	NAIL GS
Point	3903	North	1154405.583	East	1646192.159	Elevation	768.685	Code	NAIL GS
Point	5000	North	1111557.763	East	1656041.189	Elevation	573.277	Code	MON BO41
Point	1301	North	1111450.846	East	1657895.042	Elevation	589.658	Code	NAIL IN GRAVEL
Point	1302	North	1111442.113	East	1657952.519	Elevation	590.599	Code	NAIL GS
Point	1303	North	1111404.603	East	1657954.090	Elevation	584.594	Code	NAIL GS
Point	5001	North	1110464.168	East	1655213.058	Elevation	573.597	Code	NAIL
Point	5002	North	1112450.857	East	1655245.826	Elevation	577.618	Code	MON BO41A
Point	801	North	1141560.388	East	1666999.140	Elevation	597.146	Code	NAIL GS
Point	802	North	1141519.992	East	1667025.558	Elevation	598.772	Code	PK IN ASPH
Point	803	North	1141498.866	East	1666942.502	Elevation	596.274	Code	NAIL GS EDW
Point	2501	North	1139983.683	East	1676793.631	Elevation	736.523	Code	PK IN CONC
Point	3401	North	1140828.766	East	1684669.604	Elevation	749.979	Code	PK IN ASPH
Point	3701	North	1135373.871	East	1692589.208	Elevation	751.823	Code	PK IN ASPH
Point	3601	North	1129192.703	East	1689324.019	Elevation	726.690	Code	PK IN ASPH
Point	3201	North	1129062.113	East	1668049.704	Elevation	614.932	Code	PK IN ASPH
Point	3301	North	1119902.850	East	1681590.945	Elevation	705.715	Code	PK IN ASPH
Point	2301	North	1119581.911	East	1686947.357	Elevation	729.118	Code	PK IN CONC
Point	3101	North	1121196.038	East	1697939.918	Elevation	780.385	Code	PK IN ASPH
Point	MOMC	North	1212618.867	East	1830551.673	Elevation	821.648	Code	
Point	2801	North	1230695.039	East	1742824.786	Elevation	882.428	Code	PK
Point	4201	North	1226548.046	East	1743265.199	Elevation	886.404	Code	PK
Point	301	North	1224619.016	East	1752149.138	Elevation	857.781	Code	PK
Point	302	North	1224584.612	East	1752132.211	Elevation	858.050	Code	NAIL
Point	303	North	1224671.827	East	1752088.198	Elevation	853.600	Code	NAIL
Point	2101	North	1217526.110	East	1725051.080	Elevation	843.340	Code	NAIL
Point	2102	North	1217491.889	East	1725015.504	Elevation	842.285	Code	NAIL
Point	2103	North	1217516.857	East	1725099.233	Elevation	838.834	Code	NAIL
Point	201	North	1238600.322	East	1704172.671	Elevation	829.307	Code	PK
Point	202	North	1238674.995	East	1704163.581	Elevation	824.914	Code	NAIL
Point	203	North	1238700.471	East	1704188.708	Elevation	824.755	Code	PK
Point	204	North	1238744.586	East	1704178.372	Elevation	821.979	Code	NAIL
Point	5004	North	1120150.982	East	1687313.738	Elevation	748.063	Code	MON BO27
Point	5005	North	1117816.148	East	1687186.200	Elevation	760.019	Code	MON BO27A
Point	MOJC	North	1000022.234	East	1699117.611	Elevation	765.702	Code	
Point	1801	North	1033490.374	East	1715482.669	Elevation	762.808	Code	PK
Point	1802	North	1033440.143	East	1715521.533	Elevation	756.262	Code	NAIL
Point	1803	North	1033468.962	East	1715577.815	Elevation	760.168	Code	NAIL
Point	2701	North	1041743.409	East	1694757.957	Elevation	561.302	Code	NAIL
Point	1701	North	1056178.814	East	1681899.607	Elevation	658.499	Code	PK
Point	1702	North	1056204.101	East	1681963.636	Elevation	661.118	Code	NAIL
Point	1703	North	1056105.108	East	1681947.437	Elevation	652.659	Code	NAIL
Point	4401	North	1067256.588	East	1708054.111	Elevation	889.806	Code	PK
Point	2601	North	1071679.784	East	1711331.940	Elevation	873.347	Code	PK

Point	5006	North	1070429.026	East	1721683.304	Elevation	828.514	Code	MON BO23
Point	5007	North	1068844.547	East	1721653.921	Elevation	832.798	Code	MON BO23A
Point	1601	North	1066579.379	East	1726247.581	Elevation	819.897	Code	PK
Point	1602	North	1066543.201	East	1726247.743	Elevation	819.334	Code	NAIL
Point	1603	North	1066504.147	East	1726244.516	Elevation	818.390	Code	NAIL
Point	1501	North	1084077.474	East	1711460.025	Elevation	817.859	Code	PK
Point	1502	North	1084123.836	East	1711423.393	Elevation	815.327	Code	NAIL
Point	1503	North	1084184.947	East	1711427.690	Elevation	811.907	Code	NAIL
Point	901	North	1137655.023	East	1710061.360	Elevation	836.501	Code	PK
Point	902	North	1137562.819	East	1710190.402	Elevation	839.370	Code	PK
Point	903	North	1137606.699	East	1710280.744	Elevation	838.758	Code	NAIL
Point	904	North	1137546.611	East	1710089.770	Elevation	840.324	Code	NAIL
Point	1401	North	1082987.958	East	1678638.174	Elevation	801.984	Code	PK
Point	1402	North	1082994.703	East	1678609.760	Elevation	799.858	Code	NAIL
Point	1403	North	1083017.431	East	1678586.262	Elevation	797.340	Code	NAIL
Point	1201	North	1105398.540	East	1701133.930	Elevation	808.868	Code	PK
Point	1202	North	1105372.452	East	1701094.192	Elevation	808.734	Code	NAIL
Point	1203	North	1105294.679	East	1701106.142	Elevation	806.455	Code	NAIL
Point	4001	North	1120987.710	East	1720160.679	Elevation	836.708	Code	PK
Point	4002	North	1121025.050	East	1720095.043	Elevation	838.477	Code	NAIL
Point	4003	North	1120941.045	East	1720115.267	Elevation	836.198	Code	NAIL
Point	1101	North	1110555.456	East	1741458.196	Elevation	810.605	Code	NAIL
Point	1102	North	1110590.493	East	1741478.861	Elevation	809.469	Code	NAIL
Point	1103	North	1110628.129	East	1741432.134	Elevation	812.374	Code	NAIL
Point	1001	North	1136947.612	East	1736668.654	Elevation	845.413	Code	NAIL
Point	1003	North	1136953.885	East	1736616.521	Elevation	846.285	Code	PK
Point	1002	North	1136993.622	East	1736616.166	Elevation	847.365	Code	NAIL
Point	1004	North	1136899.007	East	1736612.813	Elevation	841.823	Code	NAIL
Point	4101	North	1226089.929	East	1659285.560	Elevation	809.534	Code	PK
Point	4102	North	1226141.755	East	1659286.567	Elevation	810.092	Code	NAIL
Point	4103	North	1226073.235	East	1659228.574	Elevation	813.622	Code	NAIL
Point	101	North	1244832.660	East	1667074.912	Elevation	847.521	Code	PK
Point	102	North	1244863.926	East	1667113.472	Elevation	848.798	Code	NAIL
Point	103	North	1244856.902	East	1667029.556	Elevation	845.050	Code	NAIL
Point	2201	North	1224334.422	East	1687894.725	Elevation	860.906	Code	PK
Point	2202	North	1224298.024	East	1687919.870	Elevation	860.427	Code	NAIL
Point	2203	North	1224405.263	East	1687839.883	Elevation	860.075	Code	NAIL
Point	5008	North	1238346.275	East	1702165.136	Elevation	853.457	Code	PK
Point	5010	North	1238283.293	East	1702234.004	Elevation	854.174	Code	NAIL
Point	5009	North	1238175.364	East	1702138.130	Elevation	855.364	Code	PK
Point	5011	North	1238216.918	East	1702064.716	Elevation	856.037	Code	NAIL
Point	601	North	1201850.573	East	1645779.772	Elevation	762.357	Code	NAIL
Point	602	North	1201902.617	East	1645803.110	Elevation	763.282	Code	NAIL
Point	603	North	1201835.492	East	1645693.808	Elevation	759.190	Code	NAIL
Point	2002	North	1175399.660	East	1650353.895	Elevation	714.206	Code	NAIL
Point	2001	North	1175413.049	East	1650388.085	Elevation	712.261	Code	NAIL
Point	2004	North	1175439.701	East	1650256.072	Elevation	719.291	Code	PK
Point	2003	North	1175508.813	East	1650245.202	Elevation	714.683	Code	NAIL
Point	5012	North	1176394.052	East	1685136.633	Elevation	809.685	Code	MON BO Hinton
Point	5013	North	1176276.280	East	1685104.899	Elevation	806.670	Code	MON BO Hinton RM2
Point	501	North	1196668.441	East	1688614.678	Elevation	758.732	Code	PK
Point	502	North	1196608.041	East	1688651.147	Elevation	758.271	Code	NAIL
Point	503	North	1196762.924	East	1688808.694	Elevation	761.164	Code	NAIL
Point	2901	North	1195707.332	East	1719627.305	Elevation	905.742	Code	PK
Point	401	North	1179300.519	East	1747904.155	Elevation	900.421	Code	NAIL
Point	402	North	1179327.952	East	1747902.702	Elevation	901.276	Code	NAIL
Point	403	North	1179288.972	East	1747861.067	Elevation	902.502	Code	NAIL
Point	1901	North	1170282.782	East	1715809.204	Elevation	839.899	Code	NAIL
Point	1902	North	1170294.463	East	1715757.108	Elevation	842.364	Code	NAIL

Point	1903	North	1170308.826	East	1715857.136	Elevation	840.622	Code	NAIL
Point	4301	North	1158630.895	East	1705285.018	Elevation	843.641	Code	PK
Point	3801	North	1146501.442	East	1699783.935	Elevation	789.069	Code	PK
Point	3501	North	1148111.681	East	1709666.965	Elevation	812.615	Code	DH ?
Point	3001	North	1159261.837	East	1690909.606	Elevation	792.648	Code	PK
Point	2401	North	1150309.343	East	1690212.451	Elevation	735.018	Code	PK
Point	5014	North	1111557.742	East	1656041.126	Elevation	573.435	Code	MON BO41 SEcond Shot
Point	5015	North	1111557.767	East	1656041.144	Elevation	573.358	Code	MON BO41 Third Shot