

D.G.P.S. SURVEY REPORT

**OF GOVT. FOREST LAND DEMARCATION AND
BOUNDARY POINT FIXATION
FOR SAKETWA TANK PROJECT
UNDER FOREST DIVISION – EAST SARGUJA,
FOREST RANGE SEMARSOT, DISTRICT – BALRAMPUR
SURVEYED AREA – 4.67 HECTARE**

(SUBMITTED UNDER FOREST CONSERVATION ACT 1980)



APPLICANT

**OFFICE OF THE EXECUTIVE
ENGINEER, WATER RESOURCES
DIVISION BAIKUNTHPUR
CHHATTISHGARH**



[Signature]
Executive Engineer
W/R Division No.-2 Ramanujanj
Distt. Balrampur-Ramanujanj(C.G.)

SURVEYED BY

**SIDDHARTH GEO CONSULTANTS
INDIA PVT. LTD.**

621/3, 1st FLOOR, RAMKUND SAMTA COLONY,
BEHIND LEFORTH HOSPITAL, RAIPUR (C.G.)
PIN 492001 PH NO. – 0771- 4070731
Email – info@mininggeology-sgc.com



CERTIFICATE

SIDDHARTH GEO CONSULTANTS (I) PVT. LTD. RAIPUR, (C.G.)

*This is to certify that the D.G.P.S Survey of Govt. forest land proposed to be diverted for non – forestry purpose at village Compartment no. 225, forest land under forest division East sarguja, District Balrampur., surveyed area **4.67 Hect.** done by us as par the guidelines of forest conservation Act 1980 for **Office Of The Executive Engineer, Water Resources Division Baikunthpur, District Korea** and the Co-ordinates of Boundary points are correct in our knowledge.*

The work done is as follow:

1. Create One Base point with Fixation of two ground control points on static mode.
2. Survey of 58 boundary Pillars by using DGPS and fixed up its Ground position and preparation of Geo-referenced Cadastral plan.
3. The Geo-referenced Cadastral map prepared using DGPS and superimposed vectorised SOI toposheet map.
4. Prepared DGPS survey report and soft copy of all above maps in Standard Format and digitized maps in shape file and .KML for imported in any GIS database.

Date : 10/06/2016

Place : Raipur

Siddharth Geo Consultants (India) Pvt. Ltd.



**DIRECTOR
(OPERATION)**



Executive Engineer
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1.

INTRODUCTION

Office Of The Executive Engineer, Water Resources Division
Baikunthpur District Korea, Chhattishgarh have been submitted proposal to Forest department Govt. of Chhattisgarh for diversion of Govt. forest land for non – forestry purpose, under forest conservation Act 1980. The forest area proposed to be diverted for non – forestry purpose is **4.67** hect. and situated at forest compartment no. 225 under forest range semarsot , and division East sarguja district Balrampur.

Ministry of Environment and Forest, Govt. of India vide their circular no. 11-9/98-FC dated 08/07/2011 have stipulated that to ensure accurate delineation of forest area proposed to be diverted for non – forestry purposed under Section -2 of forest conservation Act 1980 the diversion proposal under forest conservation act shall be accompanied by DGPS surveyed maps of the forest land proposed for diversion.

The **DGPS Survey** work of the Govt. forest area proposed to be diverted for non – forestry purpose, have been done by **Siddharth Geo Consultants India Private Limited**, Raipur, as par the guidelines of forest conservation Act 1980. DGPS survey have been completed successfully from dated 27/02/2016 to 28/02/2016 in the presence of WRD officials.


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2.

LOCATION OF THE AREA

The DGPS surveyed Govt. forest land proposed to be diverted for non – forestry purpose is situated near village budhudih, and 10 Km. SSE Direction from District Headquarter Balrampur (C.G.). It falls in Survey of india Toposheet no. – 64 M/10. The surveyed area is bounded by Longitudes $83^{\circ} 38' 02.35329''\text{E}$ to $83^{\circ} 38' 15.96868''\text{E}$ & Latitudes $23^{\circ} 31' 53.17681''\text{N}$ to $23^{\circ} 32' 29.09041''\text{N}$

The surveyed area comes under Govt. forest land, Compartment no. -225 under forest range semarsot and forest division – East sarguja, district Balrampur. The total DGPS surveyed forest land proposed to be diverted for non – forestry purpose is **4.67** hect.


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3.

LAND SCHEDULE OF THE SURVEYED AREA

S. NO.	VILLAGE	TYPE OF LAND	FOREST DIVISION/RANGE /VILLAGE	FOREST COMPARTMENT NO. / KHASRA NO.	SURVEYED AREA (IN HECT.)
1.	BUDHUDI H	RESERVE FOREST LAND	Ease Sarguja Balrampur \Semarsot	225	4.67
TOTAL				1	4.67


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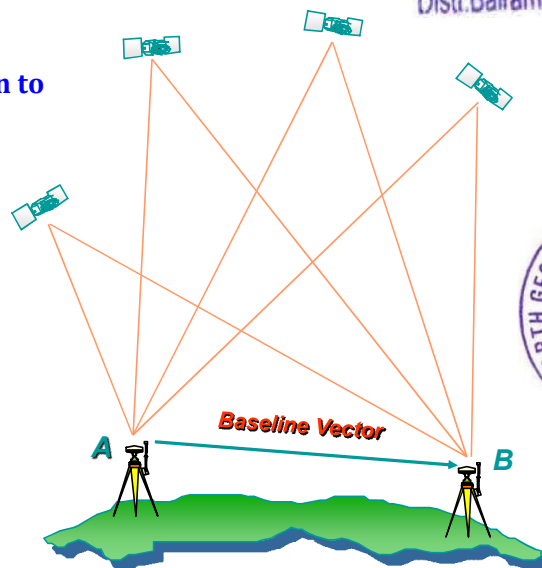


FEATURES & METHODOLOGY OF DGPS SURVEY

Differential Global Positioning System (DGPS) is an enhancement to Global Positioning System that uses a network of fixed, ground-based reference stations to broadcast the difference between the positions indicated by the satellite systems and the known fixed positions. These stations broadcast the difference between the measured satellite pseudoranges and actual (internally computed) pseudoranges, and receiver stations may correct their pseudoranges by the same amount.

Differential Positioning

- It is possible to determine the position of Rover 'B' in relation to Reference 'A' provided
 - The coordinates of the Reference Station (A) are known
 - Satellites are tracked simultaneously
- Differential Positioning
 - eliminates errors in the sat. and receiver clocks
 - minimizes atmospheric delays
 - Accuracy 0.5 cm - 5 m



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The survey work has done with the help of **Differential Global Positioning System survey**. Starting DGPS Survey by making Two permanent reference point (Base Stations) by setting up, initialization of all the parameters of BASE Unit. One BASE point has been established.

Than Initialization of the ROVER Unit in the same manner and each boundary pillars was established and fixed after 15 Minutes of reading on static mode and that's how 58 boundary points and two ground control points has been fixed.

After the successful completion of the survey, All the RAW data collected from the field will be post process in the GNSS software, than Validation of the collected data by several methods & Geo-referencing of Cadastral map/Forest Compartment maps using software. Superimposition of output files on Geo-referenced Vectorized Cadastral map/Forest Compartment maps, SOI Toposheets.


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Land Survey Overview

GNSS Solutions

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6/7/2016 2:10:49 PM

www.spectraprecision.com

Project Name : SAKETWA DAM PROJECT 1

Spatial Reference System : WGS 84

Time Zone : (UTC+05:30) Chennai, Kolkata, Mumbai, New Delhi

Linear Units : Meters

Coordinate System Summary

Coordinate system

Name :	WGS 84
Type :	Geographic
Unit name :	Radians
Radians per unit :	1
Vertical datum :	Ellipsoid
Vertical unit :	Meters
Meters per unit :	1

Datum

Name :	WGS 84
Ellipsoid Name :	WGS 84
Semi-major Axis :	6378137.000 m
Inverse Flattening :	298.257223563
DX to WGS84 :	0.0000 m
DY to WGS84 :	0.0000 m
DZ to WGS84 :	0.0000 m
RX to WGS84 :	-0.000000 "
RY to WGS84 :	-0.000000 "
RZ to WGS84 :	-0.000000 "
ppm to WGS84 :	0.000000000000


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Control Points	:	1
Reference Points	:	0
Logged Points	:	30
Target Points	:	0
Intermediate Points	:	0



Control Points

Name	Components	95% Error	Status	Control Error
SK01	Long 83° 38' 07.61779"E	0.000	FIXED	
	Lat 23° 32' 01.31512"N	0.000	FIXED	
	Ellips height 541.268	0.000	FIXED	
	Description			

Logged Points

Name	Components	95% Error	Status
SW01	Long 83° 38' 03.30049"E	0.001	Processed (static)
	Lat 23° 31' 54.78516"N	0.000	Processed (static)
	Ellips height 531.709	0.001	Processed (static)
	Description		
SW03	Long 83° 38' 04.41678"E	0.000	Processed (static)
	Lat 23° 31' 55.04526"N	0.000	Processed (static)
	Ellips height 533.746	0.000	Processed (static)
	Description		
SW04	Long 83° 38' 05.66706"E	0.001	Processed (static)
	Lat 23° 31' 55.36332"N	0.001	Processed (static)
	Ellips height 533.392	0.002	Processed (static)
	Description		
SW05	Long 83° 38' 07.63086"E	0.000	Processed (static)
	Lat 23° 31' 55.09561"N	0.000	Processed (static)
	Ellips height 533.409	0.001	Processed (static)
	Description		
SW06	Long 83° 38' 08.57763"E	0.002	Processed (static)
	Lat 23° 31' 54.96242"N	0.002	Processed (static)
	Ellips height 532.108	0.001	Processed (static)
	Description		
SW07	Long 83° 38' 09.98167"E	0.001	Processed (static)
	Lat 23° 31' 54.91540"N	0.002	Processed (static)
	Ellips height 529.544	0.002	Processed (static)
	Description		
SW08	Long 83° 38' 12.12780"E	0.001	Processed (static)
	Lat 23° 31' 54.52675"N	0.001	Processed (static)
	Ellips height 529.841	0.001	Processed (static)
	Description		
SW09	Long 83° 38' 13.93340"E	0.000	Processed (static)
	Lat 23° 31' 53.79281"N	0.000	Processed (static)
	Ellips height 530.777	0.000	Processed (static)
	Description		
SW10	Long 83° 38' 15.05042"E	0.001	Processed (static)
	Lat 23° 31' 53.29921"N	0.002	Processed (static)
	Ellips height 530.271	0.002	Processed (static)
	Description		
SW11	Long 83° 38' 15.30241"E	0.001	Processed (static)
	Lat 23° 31' 53.17681"N	0.002	Processed (static)
	Ellips height 529.291	0.002	Processed (static)
	Description		
SW12	Long 83° 38' 15.96868"E	0.001	Processed (static)
	Lat 23° 31' 54.13153"N	0.002	Processed (static)
	Ellips height 527.517	0.001	Processed (static)
	Description		




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SW13	Long	83° 38' 14.63920"E	0.002	Processed (static)
	Lat	23° 31' 55.59946"N	0.002	Processed (static)
	Ellips height	530.073	0.001	Processed (static)
	Description			
SW14	Long	83° 38' 13.53436"E	0.001	Processed (static)
	Lat	23° 31' 56.44221"N	0.000	Processed (static)
	Ellips height	529.735	0.001	Processed (static)
SW15	Long	83° 38' 12.70592"E	0.000	Processed (static)
	Lat	23° 31' 57.18530"N	0.000	Processed (static)
	Ellips height	530.416	0.001	Processed (static)
	Description			
SW16	Long	83° 38' 11.92033"E	0.002	Processed (static)
	Lat	23° 31' 58.17440"N	0.002	Processed (static)
	Ellips height	526.998	0.001	Processed (static)
	Description			
SW17	Long	83° 38' 10.88413"E	0.001	Processed (static)
	Lat	23° 31' 58.95089"N	0.001	Processed (static)
	Ellips height	530.745	0.002	Processed (static)
SW18	Long	83° 38' 10.86248"E	0.002	Processed (static)
	Lat	23° 31' 59.27516"N	0.001	Processed (static)
	Ellips height	527.119	0.002	Processed (static)
	Description			
SW19	Long	83° 38' 11.06673"E	0.000	Processed (static)
	Lat	23° 32' 00.14558"N	0.000	Processed (static)
	Ellips height	530.615	0.000	Processed (static)
	Description			
SW20	Long	83° 38' 10.54463"E	0.000	Processed (static)
	Lat	23° 32' 00.54878"N	0.000	Processed (static)
	Ellips height	531.125	0.000	Processed (static)
	Description			
SW21	Long	83° 38' 09.44651"E	0.002	Processed (static)
	Lat	23° 31' 59.90318"N	0.002	Processed (static)
	Ellips height	532.055	0.001	Processed (static)
SW22	Long	83° 38' 08.01109"E	0.001	Processed (static)
	Lat	23° 31' 59.17500"N	0.001	Processed (static)
	Ellips height	532.225	0.002	Processed (static)
	Description			
SW23	Long	83° 38' 07.28748"E	0.001	Processed (static)
	Lat	23° 31' 59.10337"N	0.002	Processed (static)
	Ellips height	531.582	0.002	Processed (static)
SW24	Long	83° 38' 05.71561"E	0.000	Processed (static)
	Lat	23° 31' 58.90878"N	0.000	Processed (static)
	Ellips height	532.443	0.000	Processed (static)
	Description			
SW25	Long	83° 38' 04.61143"E	0.002	Processed (static)
	Lat	23° 31' 58.75263"N	0.001	Processed (static)
	Ellips height	532.350	0.002	Processed (static)
	Description			
SW26	Long	83° 38' 04.05345"E	0.000	Processed (static)
	Lat	23° 31' 58.83186"N	0.000	Processed (static)
	Ellips height	533.126	0.000	Processed (static)
	Description			
SW27	Long	83° 38' 03.77271"E	0.002	Processed (static)
	Lat	23° 31' 59.55329"N	0.001	Processed (static)
	Ellips height	535.653	0.003	Processed (static)


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SW28	Long	83° 38' 03.59905"E	0.001	Processed (static)
	Lat	23° 31' 59.49306"N	0.002	Processed (static)
	Ellips height	536.977	0.001	Processed (static)
	Description			
SW29	Long	83° 38' 02.35329"E	0.001	Processed (static)
	Lat	23° 31' 57.50137"N	0.000	Processed (static)
	Ellips height	526.560	0.001	Processed (static)
	Description			
SW30	Long	83° 38' 09.74761"E	0.000	Processed (static)
	Lat	23° 31' 00.08163"N	0.000	Processed (static)
	Ellips height	530.783	0.000	Processed (static)
	Description			
SW31	Long	83° 38' 09.67562"E	0.000	Processed (static)
	Lat	23° 32' 00.03841"N	0.000	Processed (static)
	Ellips height	531.024	0.000	Processed (static)
	Description			

Files

Name	Start Time	Sampling	Epochs	Size (Kb)	Type
GKH04A16.058	16/02/27 12:28:44	1	16726	31527L1/L2	GPS/GLONASS/WAAS
BROVEA16.058	16/02/27 13:08:59	1	645	242	L1 GPS/WAAS
BROVEB16.058	16/02/27 13:25:22	1	660	206	L1 GPS
BROVEC16.058	16/02/27 13:40:08	1	794	252	L1 GPS/WAAS
BROVED16.058	16/02/27 13:58:23	1	697	240	L1 GPS/WAAS
BROVEE16.058	16/02/27 14:14:03	1	760	293	L1 GPS/WAAS
BROVEF16.058	16/02/27 14:29:14	1	951	391	L1 GPS/WAAS
BROVEG16.058	16/02/27 14:52:30	1	817	338	L1 GPS/WAAS
BROVEH16.058	16/02/27 15:15:00	1	604	209	L1 GPS
BROVEI16.058	16/02/27 15:34:23	1	873	335	L1 GPS/WAAS
GSW02A16.058	16/02/27 13:22:41	1	627	1174L1/L2	GPS/GLONASS/WAAS
GSW04A16.058	16/02/27 13:35:48	1	675	1065L1/L2	GPS/GLONASS/WAAS
GSW07A16.058	16/02/27 13:50:16	1	642	1085L1/L2	GPS/GLONASS/WAAS
GSW10A16.058	16/02/27 14:11:33	1	664	1218L1/L2	GPS/GLONASS/WAAS
GSW13A16.058	16/02/27 14:26:02	1	729	1365L1/L2	GPS/GLONASS/WAAS
GSW16A16.058	16/02/27 14:41:43	1	1209	2192L1/L2	GPS/GLONASS/WAAS
GSW19A16.058	16/02/27 15:13:27	1	620	1135L1/L2	GPS/GLONASS/WAAS
GSW22A16.058	16/02/27 15:26:47	1	662	1253L1/L2	GPS/GLONASS/WAAS
GSW25A16.058	16/02/27 15:39:23	1	618	1147L1/L2	GPS/GLONASS/WAAS
GSW28A16.058	16/02/27 16:07:03	1	815	1462L1/L2	GPS/GLONASS/WAAS
GKGP2A16.058	16/02/27 13:15:53	1	646	398	L1 GPS/GLONASS/WAAS
GSW03A16.058	16/02/27 13:30:10	1	670	462	L1 GPS/GLONASS/WAAS
GSW06A16.058	16/02/27 13:44:12	1	683	470	L1 GPS/GLONASS/WAAS
GSW09A16.058	16/02/27 13:59:18	1	679	482	L1 GPS/GLONASS/WAAS
GSW12A16.058	16/02/27 14:15:18	1	655	445	L1 GPS/GLONASS/WAAS
GSW15A16.058	16/02/27 14:32:07	1	821	556	L1 GPS/GLONASS/WAAS
GSW18A16.058	16/02/27 14:48:53	1	733	502	L1 GPS/GLONASS/WAAS
GSW20A16.058	16/02/27 15:16:21	1	805	559	L1 GPS/GLONASS/WAAS
GSW24A16.058	16/02/27 15:31:17	1	622	475	L1 GPS/GLONASS/WAAS
GSW26A16.058	16/02/27 15:43:56	1	668	417	L1 GPS/GLONASS/WAAS
GSW29A16.058	16/02/27 16:07:19	1	808	500	L1 GPS/GLONASS/WAAS


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Occupations

Site	Start Time	Time span	Type	File
SK01	February 27 2016 12:28:44.00	04:37:56.00	Static	GKH04A16.058
SW01	February 27 2016 13:08:59.00	00:10:44.00	Static	BROVEA16.058
SW05	February 27 2016 13:25:22.00	00:10:59.00	Static	BROVEB16.058
SW08	February 27 2016 13:40:08.00	00:13:13.00	Static	BROVEC16.058
SW11	February 27 2016 13:58:23.00	00:11:36.00	Static	BROVED16.058
SW14	February 27 2016 14:14:03.00	00:12:39.00	Static	BROVEE16.058
SW17	February 27 2016 14:29:14.00	00:15:50.00	Static	BROVEF16.058
SW21	February 27 2016 14:52:30.00	00:13:36.00	Static	BROVEG16.058
SW23	February 27 2016 15:15:00.00	00:10:03.00	Static	BROVEH16.058
SW27	February 27 2016 15:34:23.00	00:14:32.00	Static	BROVEI16.058
SW04	February 27 2016 13:22:41.00	00:10:13.00	Static	GSW02A16.058
SW07	February 27 2016 13:35:48.00	00:10:59.00	Static	GSW04A16.058
SW10	February 27 2016 13:50:16.00	00:10:21.00	Static	GSW07A16.058
SW13	February 27 2016 14:11:33.00	00:10:49.00	Static	GSW10A16.058
SW16	February 27 2016 14:26:02.00	00:11:32.00	Static	GSW13A16.058
SW19	February 27 2016 14:41:43.00	00:19:57.00	Static	GSW16A16.058
SW22	February 27 2016 15:13:27.00	00:10:06.00	Static	GSW19A16.058
SW25	February 27 2016 15:26:47.00	00:10:49.00	Static	GSW22A16.058
SW28	February 27 2016 15:39:23.00	00:10:05.00	Static	GSW25A16.058
SW30	February 27 2016 16:07:03.00	00:13:22.00	Static	GSW28A16.058
SW03	February 27 2016 13:15:53.00	00:10:09.00	Static	GKGP2A16.058
SW06	February 27 2016 13:30:10.00	00:10:56.00	Static	GSW03A16.058
SW09	February 27 2016 13:44:12.00	00:11:11.00	Static	GSW06A16.058
SW12	February 27 2016 13:59:18.00	00:10:57.00	Static	GSW09A16.058
SW15	February 27 2016 14:15:18.00	00:10:43.00	Static	GSW12A16.058
SW18	February 27 2016 14:32:07.00	00:13:27.00	Static	GSW15A16.058
SW20	February 27 2016 14:48:53.00	00:12:00.00	Static	GSW18A16.058
SW24	February 27 2016 15:16:21.00	00:13:13.00	Static	GSW20A16.058
SW26	February 27 2016 15:31:17.00	00:10:10.00	Static	GSW24A16.058
SW29	February 27 2016 15:43:56.00	00:10:57.00	Static	GSW26A16.058
SW31	February 27 2016 16:07:19.00	00:13:16.00	Static	GSW29A16.058

Processes

Reference	Reference File	Rover	Rover File	Mode	Num
SK01	GKH04A16.058	SW22	GSW19A16.058	Static	1
SK01	GKH04A16.058	SW18	GSW15A16.058	Static	2
SK01	GKH04A16.058	SW05	BROVEB16.058	Static	3
SK01	GKH04A16.058	SW21	BROVEG16.058	Static	4
SK01	GKH04A16.058	SW15	GSW12A16.058	Static	5
SK01	GKH04A16.058	SW19	GSW16A16.058	Static	6
SK01	GKH04A16.058	SW16	GSW13A16.058	Static	7
SK01	GKH04A16.058	SW03	GKGP2A16.058	Static	8
SK01	GKH04A16.058	SW12	GSW09A16.058	Static	9
SK01	GKH04A16.058	SW30	GSW28A16.058	Static	10
SK01	GKH04A16.058	SW23	BROVEH16.058	Static	11
SK01	GKH04A16.058	SW06	GSW03A16.058	Static	12
SK01	GKH04A16.058	SW27	BROVEI16.058	Static	13
SK01	GKH04A16.058	SW28	GSW25A16.058	Static	14
SK01	GKH04A16.058	SW25	GSW22A16.058	Static	15
SK01	GKH04A16.058	SW01	BROVEA16.058	Static	16
SK01	GKH04A16.058	SW09	GSW06A16.058	Static	17
SK01	GKH04A16.058	SW31	GSW29A16.058	Static	18
SK01	GKH04A16.058	SW17	BROVEF16.058	Static	19
SK01	GKH04A16.058	SW14	BROVEE16.058	Static	20
SK01	GKH04A16.058	SW29	GSW26A16.058	Static	21
SK01	GKH04A16.058	SW04	GSW02A16.058	Static	22
SK01	GKH04A16.058	SW11	BROVED16.058	Static	23
SK01	GKH04A16.058	SW07	GSW04A16.058	Static	24

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SK01	GKH04A16.058	SW26	GSW24A16.058	Static	25
SK01	GKH04A16.058	SW10	GSW07A16.058	Static	26
SK01	GKH04A16.058	SW08	BROVEC16.058	Static	27
SK01	GKH04A16.058	SW24	GSW20A16.058	Static	28
SK01	GKH04A16.058	SW13	GSW10A16.058	Static	29
SK01	GKH04A16.058	SW20	GSW18A16.058	Static	30
SW30	GSW28A16.058	SW31	GSW29A16.058	Static	31

Processed vectors

Vector Identifier	Vector Length	95% Error	Vector Components	95% Error	SV	PDOP	QA	Solution
SK01 - SW31	73.004	0.001	X -57.758	0.000	13	1.4		Fixed
16/02/27 16:07:19.00			Y 13.801	0.000				
+00:13:16.00			Z -42.463	0.000				
SK01 - SW18	112.579	0.001	X -87.704	0.000	14	1.4		Fixed
16/02/27 14:32:07.00			Y 26.845	0.000				
+00:13:27.00			Z -65.279	0.000				
SK01 - SW21	68.283	0.001	X -50.568	0.000	9	1.8		Fixed
16/02/27 14:52:30.00			Y 14.599	0.000				
+00:13:36.00			Z -43.501	0.000				
SK01 - SW15	192.377	0.001	X -138.655	0.000	13	1.3		Fixed
16/02/27 14:15:18.00			Y 56.625	0.000				
+00:10:43.00			Z -120.736	0.000				
SK01 - SW05	191.489	0.001	X 7.289	0.000	5	3.7		Fixed
16/02/27 13:25:22.00			Y 68.803	0.001				
+00:10:59.00			Z -178.553	0.001				
SK01 - SW19	104.788	0.001	X -96.725	0.000	17	1.1		Fixed
16/02/27 14:41:43.00			Y 15.418	0.000				
+00:19:57.00			Z -37.244	0.000				
SK01 - SW16	155.220	0.001	X -118.941	0.000	16	1.2		Fixed
16/02/27 14:26:02.00			Y 41.691	0.000				
+00:11:32.00			Z -90.599	0.000				
SK01 - SW03	211.426	0.001	X 97.225	0.000	12	1.5		Fixed
16/02/27 13:15:53.00			Y 56.421	0.001				
+00:10:09.00			Z -179.067	0.001				
SK01 - SW12	324.420	0.002	X -226.689	0.001	14	1.4		Fixed
16/02/27 13:59:18.00			Y 103.975	0.001				
+00:10:57.00			Z -207.485	0.001				
SK01 - SW30	75.017	0.000	X -59.904	0.000	16	1.3		Fixed
16/02/27 16:07:03.00			Y 13.989	0.000				
+00:13:22.00			Z -42.934	0.000				
SK01 - SW23	68.923	0.001	X 13.021	0.000	8	2.1		Fixed
16/02/27 15:15:00.00			Y 16.779	0.000				
+00:10:03.00			Z -65.569	0.000				
SK01 - SW06	198.790	0.001	X -19.773	0.000	13	1.3		Fixed
16/02/27 13:30:10.00			Y 70.556	0.000				
+00:10:56.00			Z -184.793	0.000				
SK01 - SW27	121.932	0.001	X 110.233	0.060	8	2.0		Fixed
16/02/27 15:34:23.00			Y 4.302	0.061				
+00:14:32.00			Z -51.940	0.060				
SK01 - SW28	124.435	0.001	X 112.929	0.000	16	1.5		Fixed
16/02/27 15:39:23.00			Y 4.070	0.000				

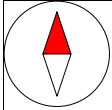
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+00:10:05.00			Z	-52.103	0.000			
SK01 - SW22	66.958	0.001	X	-9.125	0.000	16	1.4	Fixed
16/02/27 15:13:27.00			Y	18.832	0.000			
+00:10:06.00			Z	-63.604	0.000			
SK01 - SW11	328.327	0.002	X	-211.672	0.001	7	2.0	Fixed
16/02/27 13:58:23.00			Y	109.577	0.001			
+00:11:36.00			Z	-225.802	0.001			
SK01 - SW08	245.195	0.003	X	-119.069	0.001	5	3.0	Fixed
16/02/27 13:40:08.00			Y	86.647	0.002			
+00:13:13.00			Z	-196.050	0.000			
SK01 - SW20	86.899	0.001	X	-82.500	0.000	14	1.3	Fixed
16/02/27 14:48:53.00			Y	9.322	0.000			
+00:12:00.00			Z	-25.658	0.000			
SK01 - SW13	265.714	0.001	X	-191.039	0.001	14	1.4	Fixed
16/02/27 14:11:33.00			Y	81.742	0.001			
+00:10:49.00			Z	-165.609	0.001			
SK01 - SW24	92.037	0.001	X	56.008	0.000	15	1.5	Fixed
16/02/27 15:16:21.00			Y	15.357	0.000			
+00:13:13.00			Z	-71.401	0.000			
SK01 - SW10	322.235	0.002	X	-202.012	0.001	14	1.3	Fixed
16/02/27 13:50:16.00			Y	109.270	0.001			
+00:10:21.00			Z	-226.024	0.001			
SK01 - SW25	116.208	0.001	X	87.066	0.000	16	1.5	Fixed
16/02/27 15:26:47.00			Y	12.658	0.000			
+00:10:49.00			Z	-75.919	0.000			
SK01 - SW07	208.903	0.001	X	-59.216	0.000	14	1.3	Fixed
16/02/27 13:35:48.00			Y	75.595	0.001			
+00:10:59.00			Z	-185.525	0.000			
SK01 - SW09	293.625	0.002	X	-169.875	0.001	14	1.3	Fixed
16/02/27 13:44:12.00			Y	102.123	0.001			
+00:11:11.00			Z	-216.632	0.001			
SK01 - SW04	192.645	0.001	X	61.729	0.000	14	1.4	Fixed
16/02/27 13:22:41.00			Y	57.410	0.001			
+00:10:13.00			Z	-173.222	0.000			
SK01 - SW29	187.937	0.001	X	150.149	0.000	12	1.7	Fixed
16/02/27 15:43:56.00			Y	16.063	0.001			
+00:10:57.00			Z	-111.883	0.000			
SK01 - SW17	118.269	0.002	X	-89.938	0.078	5	3.8	Fixed
16/02/27 14:29:14.00			Y	29.548	0.069			
+00:15:50.00			Z	-70.891	0.071			
SK01 - SW01	235.488	0.002	X	129.639	0.001	5	5.2	Fixed
16/02/27 13:08:59.00			Y	57.435	0.001			
+00:10:44.00			Z	-188.014	0.001			
SK01 - SW14	225.346	0.002	X	-161.343	0.001	7	2.3	Fixed
16/02/27 14:14:03.00			Y	67.588	0.001			
+00:12:39.00			Z	-142.060	0.001			
SK01 - SW26	126.722	0.001	X	102.767	0.000	15	1.6	Fixed
16/02/27 15:31:17.00			Y	10.638	0.000			
+00:10:10.00			Z	-73.377	0.000			
SW30 - SW31	2.210	0.000	X	2.151	0.000	13	1.4	Fixed
16/02/27 16:07:19.00			Y	-0.183	0.000			
+00:13:06.00			Z	0.473	0.000			


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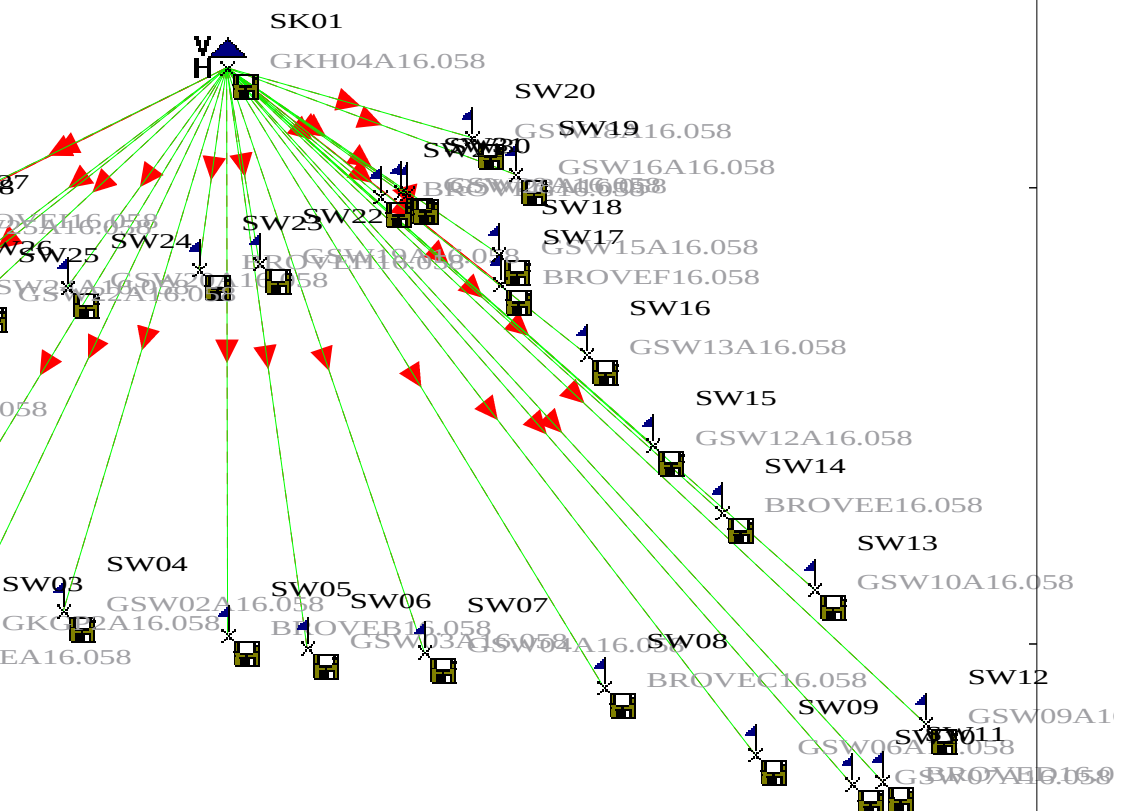


23° 32' 05.00000"N

23° 32' 00.00000"N

23° 31' 55.00000"N

23° 31' 50.00000"N



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100 m

83° 38' 05.00000"E

83° 38' 10.00000"E

83° 38' 15.00000"E

Land Survey Overview

GNSS Solutions

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Project Name : SAKETWA DAM PROJECT 2

Spatial Reference System : WGS 84

Time Zone : (UTC+05:30) Chennai, Kolkata, Mumbai, New Delhi

Linear Units : Meters

Coordinate System Summary

Coordinate system

Name :	WGS 84
Type :	Geographic
Unit name :	Radians
Radians per unit :	1
Vertical datum :	Ellipsoid
Vertical unit :	Meters
Meters per unit :	1

Datum

Name :	WGS 84
Ellipsoid Name :	WGS 84
Semi-major Axis :	6378137.000 m
Inverse Flattening :	298.257223563
DX to WGS84 :	0.0000 m
DY to WGS84 :	0.0000 m
DZ to WGS84 :	0.0000 m
RX to WGS84 :	-0.000000 "
RY to WGS84 :	-0.000000 "
RZ to WGS84 :	-0.000000 "
ppm to WGS84 :	0.000000000000


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Distt. Balrampur-Ramanujan(C.G.)

Control Points	:	1
Reference Points	:	0
Logged Points	:	29
Target Points	:	0
Intermediate Points	:	23



Control Points

Name	Components	95% Error	Status	Control Error
SK01	Long 83° 38' 07.61779"E	0.000	FIXED	
	Lat 23° 32' 01.31512"N	0.000	FIXED	
	Ellips height 541.268	0.000	FIXED	
	Description			

Logged Points

Name	Components	95% Error	Status
SGP1	Long 83° 37' 35.68455"E	0.002	Processed (static)
	Lat 23° 32' 28.38086"N	0.002	Processed (static)
	Ellips height 529.123	0.003	Processed (static)
	Description		
SGP2	Long 83° 38' 00.07874"E	0.002	Processed (static)
	Lat 23° 32' 38.49963"N	0.001	Processed (static)
	Ellips height 528.325	0.002	Processed (static)
	Description		
SW32	Long 83° 38' 09.16082"E	0.000	Processed (static)
	Lat 23° 32' 03.14881"N	0.000	Processed (static)
	Ellips height 535.720	0.000	Processed (static)
	Description		
SW33	Long 83° 38' 09.21301"E	0.000	Processed (static)
	Lat 23° 32' 03.34813"N	0.000	Processed (static)
	Ellips height 535.485	0.000	Processed (static)
	Description		
SW34	Long 83° 38' 08.75041"E	0.001	Processed (static)
	Lat 23° 32' 06.69841"N	0.002	Processed (static)
	Ellips height 533.051	0.002	Processed (static)
	Description		
SW35	Long 83° 38' 08.81884"E	0.001	Processed (static)
	Lat 23° 32' 06.70922"N	0.001	Processed (static)
	Ellips height 533.141	0.002	Processed (static)
	Description		
SW36	Long 83° 38' 08.53441"E	0.001	Processed (static)
	Lat 23° 32' 08.45884"N	0.002	Processed (static)
	Ellips height 540.737	0.001	Processed (static)
	Description		
SW37	Long 83° 38' 08.60282"E	0.001	Processed (static)
	Lat 23° 32' 08.45522"N	0.001	Processed (static)
	Ellips height 537.842	0.003	Processed (static)
	Description		
SW38	Long 83° 38' 08.54521"E	0.001	Processed (static)
	Lat 23° 32' 08.35442"N	0.000	Processed (static)
	Ellips height 537.972	0.001	Processed (static)
	Description		
SW39	Long 83° 38' 08.03044"E	0.001	Processed (static)
	Lat 23° 32' 12.48421"N	0.002	Processed (static)
	Ellips height 531.487	0.002	Processed (static)
	Description		
SW40	Long 83° 38' 08.09881"E	0.001	Processed (static)
	Lat 23° 32' 12.48321"N	0.001	Processed (static)
	Ellips height 533.669	0.002	Processed (static)
	Description		

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<i>Description</i>					
SW41	Long	83° 38' 07.77841"E	0.001	Processed	(static)
	Lat	23° 32' 14.47082"N	0.002	Processed	(static)
	Ellips height	531.615	0.002	Processed	(static)
<i>Description</i>					
SW42	Long	83° 38' 07.86123"E	0.000	Processed	(static)
	Lat	23° 32' 14.47082"N	0.000	Processed	(static)
	Ellips height	530.495	0.000	Processed	(static)
<i>Description</i>					
SW43	Long	83° 38' 07.69921"E	0.001	Processed	(static)
	Lat	23° 32' 14.51042"N	0.001	Processed	(static)
	Ellips height	531.315	0.002	Processed	(static)
<i>Description</i>					
SW44	Long	83° 38' 07.91162"E	0.001	Processed	(static)
	Lat	23° 32' 14.52121"N	0.002	Processed	(static)
	Ellips height	529.254	0.001	Processed	(static)
<i>Description</i>					
SW45	Long	83° 38' 07.49041"E	0.000	Processed	(static)
	Lat	23° 32' 19.28043"N	0.000	Processed	(static)
	Ellips height	529.286	0.000	Processed	(static)
<i>Description</i>					
SW46	Long	83° 38' 07.69923"E	0.002	Processed	(static)
	Lat	23° 32' 19.28041"N	0.001	Processed	(static)
	Ellips height	529.348	0.001	Processed	(static)
<i>Description</i>					
SW47	Long	83° 38' 07.29962"E	0.001	Processed	(static)
	Lat	23° 32' 23.34842"N	0.001	Processed	(static)
	Ellips height	529.035	0.002	Processed	(static)
<i>Description</i>					
SW48	Long	83° 38' 07.50844"E	0.000	Processed	(static)
	Lat	23° 32' 23.37213"N	0.000	Processed	(static)
	Ellips height	530.216	0.000	Processed	(static)
<i>Description</i>					
SW49	Long	83° 38' 07.14842"E	0.000	Processed	(static)
	Lat	23° 32' 26.72164"N	0.000	Processed	(static)
	Ellips height	524.775	0.000	Processed	(static)
<i>Description</i>					
SW50	Long	83° 38' 07.36081"E	0.002	Processed	(static)
	Lat	23° 32' 26.72881"N	0.002	Processed	(static)
	Ellips height	525.965	0.002	Processed	(static)
<i>Description</i>					
SW51	Long	83° 38' 07.04042"E	0.002	Processed	(static)
	Lat	23° 32' 29.07962"N	0.002	Processed	(static)
	Ellips height	531.542	0.002	Processed	(static)
<i>Description</i>					
SW52	Long	83° 38' 07.26124"E	0.000	Processed	(static)
	Lat	23° 32' 29.09041"N	0.000	Processed	(static)
	Ellips height	530.485	0.000	Processed	(static)
<i>Description</i>					
SW53	Long	83° 38' 08.80081"E	0.000	Processed	(static)
	Lat	23° 32' 04.04883"N	0.000	Processed	(static)
	Ellips height	535.892	0.000	Processed	(static)
<i>Description</i>					
SW54	Long	83° 38' 08.56682"E	0.000	Processed	(static)
	Lat	23° 32' 03.23881"N	0.000	Processed	(static)
	Ellips height	533.600	0.001	Processed	(static)
<i>Description</i>					
SW55	Long	83° 38' 07.48321"E	0.000	Processed	(static)

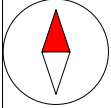

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	Lat	23° 32' 03.40821"N	0.000	Processed (static)
	Ellips height	532.204	0.000	Processed (static)
SW56	Long	83° 38' 07.55884"E	0.002	Processed (static)
	Lat	23° 32' 04.29362"N	0.001	Processed (static)
	Ellips height	530.665	0.001	Processed (static)
SW57	Long	83° 38' 08.97214"E	0.000	Processed (static)
	Lat	23° 32' 03.17761"N	0.000	Processed (static)
	Ellips height	534.681	0.000	Processed (static)
	Description			
SW58	Long	83° 38' 09.05641"E	0.001	Processed (static)
	Lat	23° 32' 03.99841"N	0.002	Processed (static)
	Ellips height	535.804	0.001	Processed (static)
	Description			


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23° 33' 00.00000"N

23° 32' 40.00000"N

SGP2

BROVECS6629

SW52

GSW39A16.059

SW40

GSW43A16.059

SW43

GSW44A16.059

SW45

GSW47A16.059

SW47

GSW48A16.059

SW49

GSW36A16.059

SW36

GSW35A16.059

GSW30A16.059

SW56

BROVEE16.059

SK02A16.059

GSK01A16.059

SGP1

GSW58A16.059

23° 32' 20.00000"N

23° 32' 00.00000"N

23° 31' 40.00000"N

Agun
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W/R Division No.-2 Ramanujan
Distt.Balrampur-Ramanujan(C.G.)



500 m

83° 37' 40.00000"E

83° 38' 00.00000"E

83° 38' 20.00000"E

CO-ORDINATES OF THE SURVEYED GOVT. FOREST LAND FOR
SAKETWA TANK PROJECT UNDER EAST SARGUJA FOREST
DIVISION BALRAMPUR DISTRICT

DGPS POINT	LONGITUDE	LATITUDE	ELEVATION
(BASE)SK01	83° 38' 07.61779"E	23° 32' 01.31512"N	541.268
SW01	83° 38' 03.30049"E	23° 31' 54.78516"N	531.709
SW02	83° 38' 03.63122"E	23° 31' 54.84214"N	532.458
SW03	83° 38' 04.41678"E	23° 31' 55.04526"N	533.746
SW04	83° 38' 05.66706"E	23° 31' 55.36332"N	533.392
SW05	83° 38' 07.63086"E	23° 31' 55.09561"N	533.409
SW06	83° 38' 08.57763"E	23° 31' 54.96242"N	532.108
SW07	83° 38' 09.98167"E	23° 31' 54.91540"N	529.544
SW08	83° 38' 12.12780"E	23° 31' 54.52675"N	529.841
SW09	83° 38' 13.93340"E	23° 31' 53.79281"N	530.777
SW10	83° 38' 15.05042"E	23° 31' 53.29921"N	530.271
SW11	83° 38' 15.30241"E	23° 31' 53.17681"N	529.291
SW12	83° 38' 15.96868"E	23° 31' 54.13153"N	527.517
SW13	83° 38' 14.63920"E	23° 31' 55.59946"N	530.073
SW14	83° 38' 13.53436"E	23° 31' 56.44221"N	529.735
SW15	83° 38' 12.70592"E	23° 31' 57.18530"N	530.416
SW16	83° 38' 11.92033"E	23° 31' 58.17440"N	526.998
SW17	83° 38' 10.88413"E	23° 31' 58.95089"N	530.745
SW18	83° 38' 10.86248"E	23° 31' 59.27516"N	527.119
SW19	83° 38' 11.06673"E	23° 32' 00.14558"N	530.615
SW20	83° 38' 10.54463"E	23° 32' 00.54878"N	531.125
SW21	83° 38' 09.44651"E	23° 31' 59.90318"N	532.055
SW22	83° 38' 08.01109"E	23° 31' 59.17500"N	532.225
SW23	83° 38' 07.28748"E	23° 31' 59.10337"N	531.582
SW24	83° 38' 05.71561"E	23° 31' 58.90878"N	532.443
SW25	83° 38' 04.61143"E	23° 31' 58.75263"N	532.35
SW26	83° 38' 04.05345"E	23° 31' 58.83186"N	533.126
SW27	83° 38' 03.77271"E	23° 31' 59.55329"N	535.653
SW28	83° 38' 03.59905"E	23° 31' 59.49306"N	536.977
SW29	83° 38' 02.35329"E	23° 31' 57.50137"N	526.56
SW30	83° 38' 09.74761"E	23° 32' 00.08163"N	530.783
SW31	83° 38' 09.67562"E	23° 32' 00.03841"N	531.024
SW32	83° 38' 09.16082"E	23° 32' 03.14881"N	535.72
SW33	83° 38' 09.21301"E	23° 32' 03.34813"N	535.485


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SW34	83° 38' 08.75041"E	23° 32' 06.69841"N	533.051
SW35	83° 38' 08.81884"E	23° 32' 06.70922"N	533.141
SW36	83° 38' 08.53441"E	23° 32' 08.45884"N	540.737
SW37	83° 38' 08.60282"E	23° 32' 08.45522"N	537.842
SW38	83° 38' 08.54521"E	23° 32' 08.35442"N	537.972
SW39	83° 38' 08.03044"E	23° 32' 12.48421"N	531.487
SW40	83° 38' 08.09881"E	23° 32' 12.48321"N	533.669
SW41	83° 38' 07.77841"E	23° 32' 14.47082"N	531.615
SW42	83° 38' 07.86123"E	23° 32' 14.47082"N	530.495
SW43	83° 38' 07.69921"E	23° 32' 14.51042"N	531.315
SW44	83° 38' 07.91162"E	23° 32' 14.52121"N	529.254
SW45	83° 38' 07.49041"E	23° 32' 19.28043"N	529.286
SW46	83° 38' 07.69923"E	23° 32' 19.28041"N	529.348
SW47	83° 38' 07.29962"E	23° 32' 23.34842"N	529.035
SW48	83° 38' 07.50844"E	23° 32' 23.37213"N	530.216
SW49	83° 38' 07.14842"E	23° 32' 26.72164"N	524.775
SW50	83° 38' 07.36081"E	23° 32' 26.72881"N	525.965
SW51	83° 38' 07.04042"E	23° 32' 29.07962"N	531.542
SW52	83° 38' 07.26124"E	23° 32' 29.09041"N	530.485
SW53	83° 38' 08.80081"E	23° 32' 04.04883"N	535.892
SW54	83° 38' 08.56682"E	23° 32' 03.23881"N	533.6
SW55	83° 38' 07.48321"E	23° 32' 03.40821"N	532.204
SW56	83° 38' 07.55884"E	23° 32' 04.29362"N	530.665
SW57	83° 38' 08.97214"E	23° 32' 03.17761"N	534.681
SW58	83° 38' 09.05641"E	23° 32' 03.99841"N	535.804

GROUND CONTROL POINTS

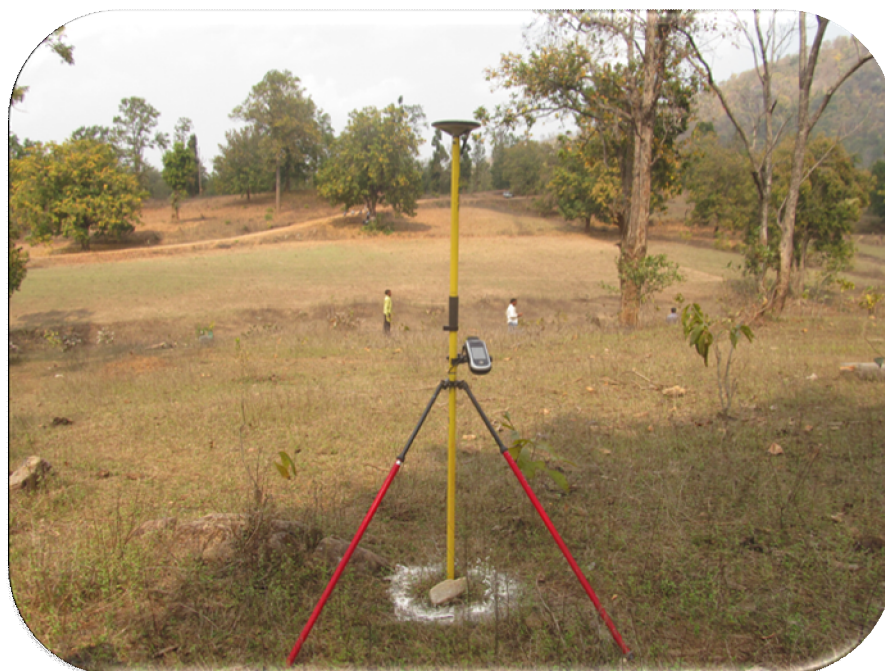
SGP1	83° 37' 35.68455"E	23° 32' 28.38086"N	529.123
SGP2	83° 38' 00.07874"E	23° 32' 38.49963"N	528.325


 Executive Engineer
 W/R Division No.-2 Ramanujan
 Distt. Balrampur-Ramanujan(C.G.)





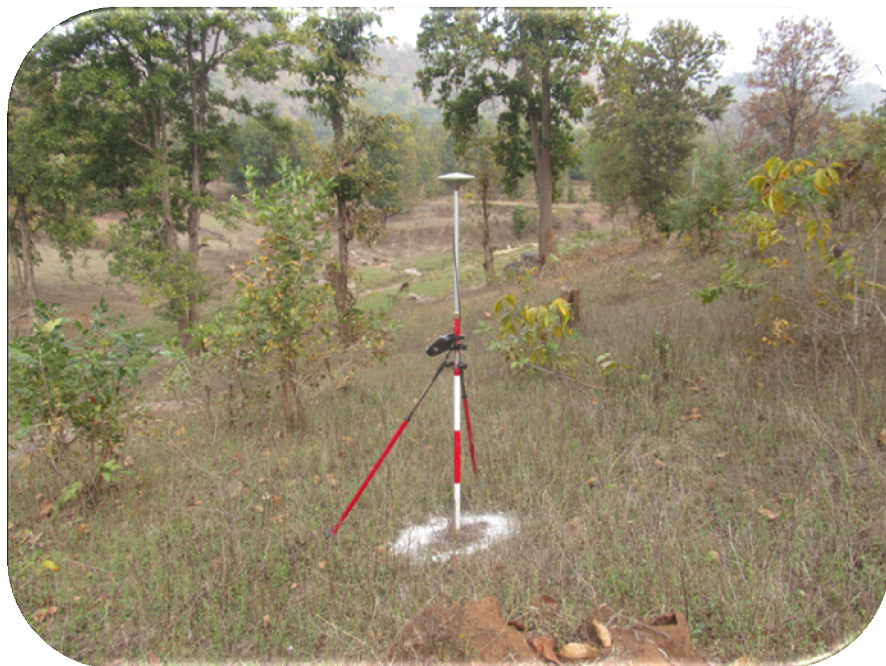
FIXATION OF BASE POINT



FIXATION OF BOUNDARY POINT

Agarwal
Executive Engineer
 W/R Division No.-2 Ramanujan
 Distt. Balrampur-Ramanujan(C.G.)





FIXATION OF BOUNDARY POINT

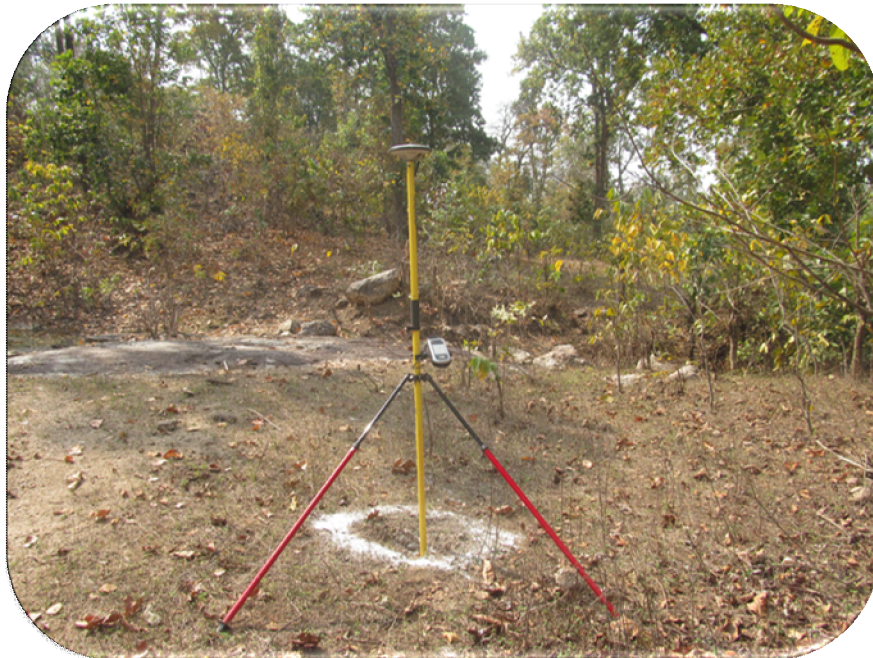


[Signature]
Executive Engineer
W/R Division No.-2 Ramanujanj
Distt. Balrampur-Ramanujanj(C.G.)





FIXATION OF BOUNDARY POINT




Executive Engineer
W/R Division No.-2 Ramanujganj
Distt. Balrampur-Ramanujganj(C.G.)





FIXATION OF BOUNDARY POINT



Agarwal
Executive Engineer
W/R Division No.-2 Ramanujan
Distt. Balrampur-Ramanujan(C.G.)





FIXATION OF GCP POINT




Executive Engineer
W/R Division No.-2 Ramanujan
Distt. Balrampur-Ramanujan(C.G.)

