

D.G.P.S. SURVEY REPORT

**FOREST AREA DEMARCATION AND BOUNDARY POINT FIXATION
FOR PROPOSED KHUTPALI DIVERSION PROJECT (CANAL) IN
FOREST COMPARTMENT NO.**

**(P3294, P3295, P3299, P3306, P3307, P3308, P3315 AND P3320) OF
FOREST DIVISION – BALRAMPUR, FOREST RANGE – BALRAMPUR
AND CHANDO, DISTRICT – BALRAMPUR
SURVEYED AREA – 21.293 HECTARE**



APPLICANT

**OFFICE OF THE EXECUTIVE
ENGINEER, WATER RESOURCES
DIVISION NO. - 2
RAMANUJGANJ, CHHATTISHGARH**

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

SURVEYED BY

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

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CERTIFICATE

SIDDHARTH GEO CONSULTANT INDIA PRIVATE LIMITED, RAIPUR, (C.G.)

*This is to certify that the D.G.P.S Survey of Proposed Khutpali Diversion Project over an area of 21.293 Hect. in forest compartment no. P3294, P3295, P3299, P3306, P3307, P3308 P3315 and P3320 of Balrampur Forest Division, Forest Range Balrampur and Chando in District- Balrampur (Chhattisgarh) **Office of the executive engineer, W.R.D. No. 2 Ramanujganj, (C.G.)** obtained order for Khutpali Diversion Project. The work done by **Siddharth Geo Consultant India Private Limited, Raipur.***

The work done is as follow:

- 1. Create Two Base point.*
- 2. Fixation of two hundred thirty five Boundary points.*
- 3. Fixation of Four ground control points.*

As per the work order the Co-ordinates of Boundary points & surveyed area are corrected and we have successfully completed the work, which is correct in our knowledge.

*Date : 18/03/2016
Place : Raipur*

Siddharth Geo Consultants (India) Pvt. Ltd.

DIRECTOR
(OPERATION)

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INTRODUCTION

Office of the executive engineer, Water Resources Division No. 2 Ramanujganj (C.G.) obtained order for Khutpali Diversion project over an area of 21.293 Hect. in forest compartment no. P3294, P3295, P3299, P3306, P3307, P3308 P3315 and P3320 of Balrampur Forest Division, Forest Range Balrampur and Chando at District- Balrampur (Chhattisgarh). D.G.P.S. survey work has been done by ***Siddharth Geo Consultant India Private Limited***, Raipur (C.G.) as per the Forest Conservation Act – 1980, for obtain forest clearance for Khutpali Diversion project by **Water Resources Division No. 2 Ramanujganj**. The D.G.P.S survey was done successfully and accurately on dated 24/04/2015 to 10/05/2015 and 11.03.2016 to 12.03.2016 in the presence of W.R.D. official & team of ***Siddharth Geo Consultant India Private Limited (Alok verma, Vinod markam, Jaineet khalko Naveen Nirmalkar & Syed asif)*** according to Order no. 852/SAC/14-15 / Ramanujganj dated 22/04/2015.

LOCATION OF THE AREA

The surveyed area is situated near Khutpali Sauni Village, Proposed Khutpali Diversion Project started at N Direction of Khutpali village and Ended at West direction of Chirkoma village. Surveyed area is situated in 16 Km. SE Direction from District Balrampur (C.G.). It falls in Survey of India Toposheet no. – 64 M/10 & 11. The surveyed area is bounded by Longitudes $83^{\circ} 42' 48.04753''$ E to $83^{\circ} 44' 27.39017''$ E & Latitudes N $23^{\circ} 29' 40.47770''$ N to N $23^{\circ} 33' 06.66698''$ N

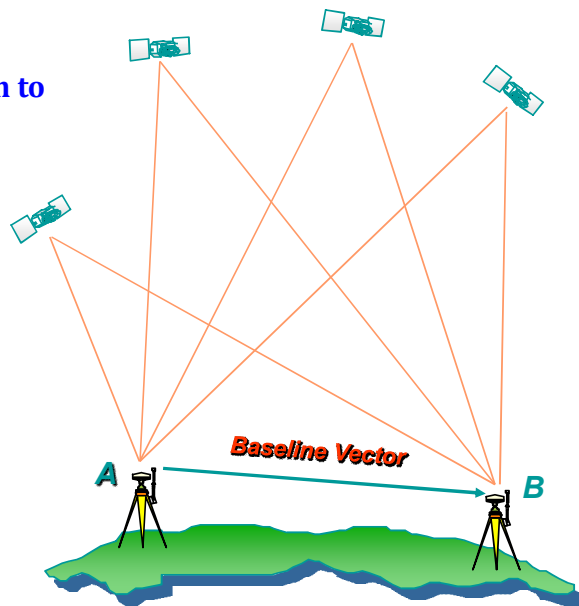
The surveyed area comes under Govt. forest land, forest compartment no. P3294, P3295, P3299, P3306, P3307, P3308 P3315 and P3320 of Balrampur Forest Division, Forest Range Balrampur and Chando at District- Balrampur (Chhattisgarh) the total surveyed area is 21.293 hect.

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



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 for minimum 2.5 Hrs reading. Two 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 and that's how 235 boundary points and four 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 Forest Compartment maps using software. Superimposition of output files on Geo-referenced Vectorized Forest Compartment maps, SOI Toposheets and Satellite Imageries (LISS IV) purchased from NRSC, Hyderabad.

**CO-ORDINATES OF THE FIXED BOUNDARY POINTS
OF KHUTPALI DIVERSION PROJECT**

DGPS POINTS	LONGITUDE	LATITUDE	ELEVATION
KOT04 (BASE)	83° 42' 46.26097"E	23° 28' 41.85115"N	521.304
PK81	83° 42' 50.73345"E	23° 29' 41.12432"N	528.577
P81A	83° 42' 52.58290"E	23° 29' 42.07426"N	523.912
PK82	83° 42' 51.53010"E	23° 29' 40.47770"N	529.098
P82A	83° 42' 53.59498"E	23° 29' 41.88780"N	522.61
PK83	83° 42' 53.92255"E	23° 29' 42.06763"N	522.232
P83A	83° 42' 55.24729"E	23° 29' 43.34019"N	526.573
P83B	83° 42' 55.98429"E	23° 29' 43.83664"N	525.845
PK84	83° 42' 52.89535"E	23° 29' 42.30786"N	522.911
P84A	83° 42' 54.37904"E	23° 29' 43.87987"N	522.84
P84B	83° 42' 55.28223"E	23° 29' 44.54521"N	524.067
PK85	83° 42' 57.73195"E	23° 29' 46.36427"N	528.809
PK86	83° 42' 58.35745"E	23° 29' 45.57700"N	528.752
PK87	83° 43' 00.55698"E	23° 29' 47.29186"N	528.351
PK88	83° 42' 59.70974"E	23° 29' 48.04550"N	526.747
PK89	83° 43' 00.39386"E	23° 29' 48.32094"N	527.041
PK90	83° 43' 02.77032"E	23° 29' 47.48307"N	526.734
PK91	83° 43' 03.47696"E	23° 29' 47.54350"N	526.928
PK92	83° 43' 02.92745"E	23° 29' 48.35474"N	527.741
PK93	83° 43' 04.13556"E	23° 29' 49.49732"N	520.812
PK94	83° 43' 05.04180"E	23° 29' 49.03557"N	519.138
PK95	83° 43' 05.32242"E	23° 29' 49.34582"N	519.286
PK96	83° 43' 04.50503"E	23° 29' 49.94782"N	521.379
PK97	83° 43' 05.46625"E	23° 29' 50.72880"N	526.068
PK98	83° 43' 06.12444"E	23° 29' 49.97798"N	522.649
PK99	83° 43' 08.00594"E	23° 29' 51.05210"N	525.874
P100	83° 43' 07.23396"E	23° 29' 51.73520"N	526.446
P101	83° 43' 08.64508"E	23° 29' 52.85541"N	524.157
P102	83° 43' 09.55092"E	23° 29' 52.31850"N	522.761
P103	83° 43' 10.31988"E	23° 29' 53.00316"N	521.399
P104	83° 43' 09.50875"E	23° 29' 53.60078"N	523.607
P105	83° 43' 10.45363"E	23° 29' 54.36185"N	525.9
P106	83° 43' 11.12513"E	23° 29' 53.63184"N	524.165
P107	83° 43' 11.29307"E	23° 29' 53.84076"N	524.04
P108	83° 43' 13.23597"E	23° 29' 55.85214"N	524.778

**CO-ORDINATES OF THE FIXED BOUNDARY POINTS
OF KHUTPALI DIVERSION PROJECT**

P109	83° 43' 12.52207"E	23° 29' 56.54265"N	524.956
P110	83° 43' 13.23228"E	23° 29' 57.22471"N	525.782
P111	83° 43' 13.98358"E	23° 29' 56.58018"N	523.872
P112	83° 43' 15.56094"E	23° 29' 57.81501"N	528.391
P113	83° 43' 14.86551"E	23° 29' 58.50545"N	529.483
P114	83° 43' 20.42099"E	23° 30' 02.18709"N	529.011
P115	83° 43' 20.75638"E	23° 30' 01.25522"N	526.944
P116	83° 43' 21.23268"E	23° 30' 01.38994"N	523.535
P117	83° 43' 21.02964"E	23° 30' 02.28913"N	528.158
P118	83° 43' 21.27044"E	23° 30' 02.37179"N	526.662
P119	83° 43' 21.73322"E	23° 30' 01.51262"N	524.574
P120	83° 43' 24.52607"E	23° 30' 02.07677"N	531.341
P121	83° 43' 24.31304"E	23° 30' 03.03471"N	532.286
P122	83° 43' 28.80323"E	23° 30' 03.57184"N	533.297
P123	83° 43' 29.07335"E	23° 30' 02.63604"N	533.376
P124	83° 43' 29.53034"E	23° 30' 02.87812"N	533.401
P125	83° 43' 31.70286"E	23° 30' 04.94087"N	527.251
P126	83° 43' 30.85846"E	23° 30' 05.54408"N	527.623
P127	83° 43' 36.83665"E	23° 30' 10.37937"N	526.026
P128	83° 43' 37.16985"E	23° 30' 09.46140"N	524.963
P129	83° 43' 38.59425"E	23° 30' 10.44094"N	526.579
P130	83° 43' 37.90619"E	23° 30' 11.18367"N	528.597
P131	83° 43' 38.14094"E	23° 30' 11.27153"N	528.809
P132	83° 43' 44.74217"E	23° 30' 12.98175"N	526.364
P133	83° 43' 45.56852"E	23° 30' 12.36763"N	524.979
P134	83° 43' 51.55726"E	23° 30' 57.78746"N	527.009
P135	83° 43' 51.90739"E	23° 30' 58.69772"N	527.066
P136	83° 43' 56.46244"E	23° 30' 56.40376"N	528.501
P137	83° 43' 56.30640"E	23° 30' 55.63417"N	527.721
P138	83° 43' 56.98985"E	23° 30' 55.66081"N	528.146
P139	83° 43' 57.09418"E	23° 30' 56.32040"N	530.407
BC04 (BASE)	83° 44' 50.21852"E	23° 31' 36.27968"N	514.693
P165	83° 44' 27.02655"E	23° 32' 02.74405"N	516.639
P166	83° 44' 27.39017"E	23° 32' 03.66343"N	514.989
P167	83° 44' 23.97127"E	23° 32' 05.61969"N	515.351
P168	83° 44' 23.34923"E	23° 32' 04.81737"N	516.921
P169	83° 44' 22.46487"E	23° 32' 05.48605"N	515.831
P170	83° 44' 23.05751"E	23° 32' 06.28877"N	514.781

**CO-ORDINATES OF THE FIXED BOUNDARY POINTS
OF KHUTPALI DIVERSION PROJECT**

P171	83° 44' 20.85641"E	23° 32' 08.34205"N	510.722
P172	83° 44' 19.59145"E	23° 32' 07.15113"N	512.498
P173	83° 44' 19.07483"E	23° 32' 07.57964"N	509.19
P174	83° 44' 20.32275"E	23° 32' 08.80793"N	511.164
P175	83° 44' 17.58000"E	23° 32' 10.67494"N	514.863
P176	83° 44' 16.90534"E	23° 32' 09.92464"N	516.368
P177	83° 44' 16.26376"E	23° 32' 10.64267"N	517.884
P178	83° 44' 16.99377"E	23° 32' 11.35633"N	516.377
P179	83° 44' 16.15665"E	23° 32' 12.43119"N	513.532
P180	83° 44' 15.05504"E	23° 32' 11.61298"N	518.161
P181	83° 44' 14.65476"E	23° 32' 12.14842"N	518.274
P182	83° 44' 15.86315"E	23° 32' 13.03647"N	514.621
P183	83° 44' 13.78543"E	23° 32' 16.26464"N	517.114
P184	83° 44' 12.93740"E	23° 32' 15.69363"N	520.325
P185	83° 44' 11.17164"E	23° 32' 16.81094"N	520.297
P186	83° 44' 12.43377"E	23° 32' 18.08262"N	508.212
P187	83° 44' 11.20602"E	23° 32' 19.50392"N	512.666
P188	83° 44' 10.12127"E	23° 32' 17.93165"N	516.888
P189	83° 44' 09.31654"E	23° 32' 18.48958"N	510.353
P190	83° 44' 10.57062"E	23° 32' 20.12857"N	507.932
P191	83° 44' 10.30633"E	23° 32' 20.35642"N	507.577
P192	83° 44' 09.05179"E	23° 32' 18.58826"N	513.338
P193	83° 44' 08.45595"E	23° 32' 19.30184"N	516.693
P194	83° 44' 09.26001"E	23° 32' 20.53920"N	514.358
P195	83° 44' 08.90052"E	23° 32' 20.70796"N	514.25
P196	83° 44' 07.71501"E	23° 32' 20.49426"N	515.623
KP01	83° 44' 07.14373"E	23° 32' 20.53432"N	506.699
KP02	83° 44' 07.73563"E	23° 32' 20.49694"N	506.052
KP03	83° 44' 08.96085"E	23° 32' 20.86616"N	505.078
KP04	83° 43' 49.81085"E	23° 32' 28.29018"N	491.172
KP05	83° 43' 51.28066"E	23° 32' 29.06172"N	490.831
KP06	83° 43' 49.74202"E	23° 32' 31.04257"N	486.87
KP07	83° 43' 51.71572"E	23° 32' 31.20324"N	486.659
KP08	83° 43' 49.57232"E	23° 32' 33.04150"N	493.628
KP09	83° 43' 51.20342"E	23° 32' 33.94369"N	495.811
KP10	83° 43' 44.51777"E	23° 32' 39.59006"N	494.253
KP11	83° 43' 46.26722"E	23° 32' 40.31772"N	495.635
KP12	83° 43' 38.01422"E	23° 32' 51.34596"N	503.284

**CO-ORDINATES OF THE FIXED BOUNDARY POINTS
OF KHUTPALI DIVERSION PROJECT**

KP13	83° 43' 39.75937"E	23° 32' 52.03654"N	503.308
KP14	83° 43' 38.24922"E	23° 32' 59.64478"N	497.675
KP15	83° 43' 40.20555"E	23° 32' 59.86910"N	496.227
KP16	83° 43' 37.47353"E	23° 33' 05.07546"N	496.851
KP17	83° 43' 39.25519"E	23° 33' 05.23883"N	498.016
KP18	83° 43' 37.45958"E	23° 33' 05.61786"N	497.388
KP19	83° 43' 38.95112"E	23° 33' 06.66355"N	497.492
KP20	83° 43' 36.93952"E	23° 33' 05.93780"N	497.207
KP21	83° 43' 38.22704"E	23° 33' 07.18269"N	497.39
KP22	83° 43' 32.07227"E	23° 33' 09.24848"N	493.67
KP23	83° 43' 33.21443"E	23° 33' 10.38124"N	494.01
KP24	83° 43' 26.66008"E	23° 33' 11.93615"N	485.586
KP25	83° 43' 27.34719"E	23° 33' 13.45873"N	491.534
KP26	83° 43' 22.44385"E	23° 33' 12.95178"N	494.426
KP27	83° 43' 23.53961"E	23° 33' 14.43758"N	494.632
KP28	83° 43' 20.70719"E	23° 33' 14.44857"N	501.729
KP29	83° 43' 22.01192"E	23° 33' 15.78838"N	500.859
KP30	83° 43' 20.35044"E	23° 33' 16.87017"N	504.35
KP31	83° 43' 17.46993"E	23° 33' 16.87102"N	516.193
KP32	83° 43' 18.48939"E	23° 33' 18.15619"N	508.206
KP33	83° 43' 16.81566"E	23° 33' 17.07626"N	518.644
KP34	83° 43' 17.36073"E	23° 33' 18.67096"N	511.568
KP35	83° 43' 13.98357"E	23° 33' 17.39296"N	515.835
KP36	83° 43' 13.98004"E	23° 33' 19.06135"N	504.973
KP37	83° 43' 09.96848"E	23° 33' 16.91182"N	523.894
KP38	83° 43' 09.72378"E	23° 33' 18.42769"N	512.883
KP39	83° 43' 07.10179"E	23° 33' 16.88273"N	523.554
KP40	83° 43' 06.94078"E	23° 33' 18.67843"N	514.035
KP41	83° 43' 04.01331"E	23° 33' 17.19765"N	516.419
KP42	83° 43' 04.94781"E	23° 33' 18.77946"N	510.557
KP43	83° 43' 01.63749"E	23° 33' 17.63464"N	510.035
KP44	83° 43' 02.88515"E	23° 33' 18.98147"N	508.817
GCP			
NGP1	83° 42' 24.14138"E	23° 29' 22.56350"N	538.359
NGP2	83° 42' 50.06228"E	23° 29' 06.93886"N	527.941
DGP2	83° 43' 44.87558"E	23° 31' 26.61963"N	546.19
BGP2	83° 44' 56.30176"E	23° 30' 42.44007"N	514.768