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साउथ ईस्टर्न कोलफील्ड्स लिमिटेड
SOUTH EASTERN COAL FIELDS LIMITED

एक मिनी रत्न कंपनी-A MINIRATNA COMPANY

CIN: U10102CT1985GOI003161

(A Subsidiary of Coal India Limited)

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Ref No. SECL/SAM/CHHAL/15/

2183
29/09/15

Dated : 27/09/2015

29

प्रति,

वन मण्डलाधिकारी,
धरमजयगढ़
जिला रायगढ़ (छ.ग.)

विषय :- वन भूमि के अधिग्रहण के लिये Geo-Co-Ordinate DGPS सर्वेक्षण के संबंध में।

संदर्भ :- क्रमांक/मा.चि./2015/4969 धरमजयगढ़ दिनांक 17/09/2015

महोदय,

उपरोक्त विषयान्तर्गत लेख है कि एसईसीएल के छाल खुली खान (SEAM-III) परियोजना (6MTY) हेतु भूमि अधिग्रहण के तहत ग्राम लात के 176.710 हेक्टेयर संरक्षित वनभूमि एवं ग्राम खेदापाली के 8.307 हेक्टेयर राजस्व वनभूमि (छोटे-बड़े झाड़ का जंगल) का Geo-Co-Ordinate DGPS सर्वेक्षण का कार्य पूर्ण होने की सूचना प्रतिवेदन जो CMPDI द्वारा प्रेषित है एतद् द्वारा संलग्न किया जा रहा है।

यह आपके सादर सूचनार्थ प्रेषित है।

संलग्न :- यथोपरि।

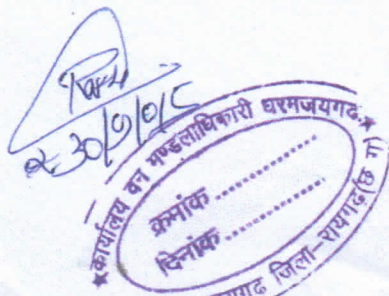
सादर सूचनार्थ :-

महाप्रबंधक, रायगढ़ क्षेत्र।

प्रतिलिपि :-

1. योजना एवं परियोजना अधिकारी, रायगढ़ क्षेत्र।
2. वन एवं पर्यावरण अधिकारी, रायगढ़ क्षेत्र।
3. भू-राजस्व अधिकारी, रायगढ़ क्षेत्र/छाल उपक्षेत्र।

उपमहाप्रबंधक (खनन)/उपक्षेत्रीय प्रबंधक
एसईसीएल छाल उपक्षेत्र
29/09/2015





सेन्ट्रल माईन प्लानिंग एण्ड डिजाइन इन्स्टीट्यूट लि.

कोल इंडिया लिमिटेड की अनुषंगी कंपनी/भारत सरकार का एक लोक उपक्रम
क्षेत्रीय संस्थान-5, एसईसीएल कॉम्प्लेक्स, सीपत रोड, बिलासपुर 495006 (छ.ग.)

Central Mine Planning & Design Institute Limited

A Subsidiary of Coal India Ltd/ A Govt. of India Public sector Undertaking

CIN:U14292JH1975GO1001223

RI-V, SECL Complex, Seepat Road, Bilaspur (CG)- 495006

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and ISO 9001
Company

Tel: 07752-246481-492

Fax: 07752-246481

NO. RV/EXP/2015/GMT/

Dated 04/09/2015

To,

प्रति,

महाप्रबंधक (यो.एवं परि.)

एसईसीएल, सीपत रोड

बिलासपुर (छ.ग.)

Sub: Preparation of Geo-referenced Boundary Map (in shape file) of Forest Land Chhal OC Expn Seam-III (6MTY) Project, Raigarh Area, SECL.

Ref: SECL/BSP/P&P/H-161 Dated 30/03/2015

Dear Sir,

Please find enclosed herewith the report on preparation of geo-referenced boundary map (in shape file) of forest land for Chhal OC Expn Seam-III (6MTY) Project, Raigarh Area, SECL and a CD containing shape file and kml file.

This report is prepared for use in forest area diversion application only on the basis of surveyed / digitized coordinates of forest area falling in Chhal OC Expn Seam-III (6MTY) Project provided by SECL.

Kindly acknowledge receipt.

धन्यवाद

Encl: Report with plans and CD

NO (Env & Forest)
SAM Chhal
8.9.15

भवदीय,
क्षेत्रीय निदेशक

सूचनार्थ:

1. महाप्रबंधक ((गवेषण), सी.एम.पी.डी.आई.(मुख्यालय) गोंडवाना प्लेस,काँके रोड, रांची for information.
2. महाप्रबंधक (भुप्रणाली), सी.एम.पी.डी.आई.(मुख्यालय) गोंडवाना प्लेस,काँके रोड, रांची for information.
3. महाप्रबंधक (व्यवसाय विकास), सी.एम.पी.डी.आई.(मुख्यालय) गोंडवाना प्लेस,काँके रोड, रांची for information.
4. महाप्रबंधक, Raigarh क्षेत्र, एसईसीएल, (छ.ग.)
5. मुख्य प्रबंधक (खनन वन विभाग), एसईसीएल, बिलासपुर (छ.ग.) for information.

SECL Raigarh Area
Cy No.-E.S.I.-481
Date-8/9/15

REGD OFFICE: Gondwana Place, Kanke Road, Ranchi – 834031 (JH), India
Website: www.cmpdi.co.in, Phone No: 0651-2230483, 2230933, Fax No: 0651-2231447



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**REPORT ON PREPARATION OF GEO-REFERENCED
BOUNDARY MAP (IN SHAPE FILE) OF FOREST LAND
CHHAL OC EXPN SEAM-III (6MTY) PROJECT
RAIGARH AREA
SOUTH EASTERN COALFIELDS LIMITED**



SEPT - 2015



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II	
III	
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DRAWINGS

DWG NO	SUBJECT
RV/EXP/ GMT/2015 /8	Plan showing forest area of Chhal OC Expn Seam-III (6MTY) Project



Report on Preparation of Geo-referenced Boundary Map (in shape file) of Forest Land, Chhal OC Expn Seam-III (6MTY) Project, Raigarh Area, SECL

1.0 Introduction

South Eastern Coalfields Limited (SECL) vide letter number SECL/BSP/FOREST/DGPS/2015/80 dated 03-01-2015, had requested CMPDI to provide geo-referenced boundary map in shape file of forest land falling in Chhal OC Expn Seam-III (6MTY) project. An offer letter No: RV/EXP/2015/DGPS/864 dated 30-03-2015 was sent to SECL for acceptance.

Subsequently, the work has been incorporated in the annual action plan for 2015-2016 vide letter number SECL/BILASPUR/P&P/H-161 dated 30/03/2015. DGPS work carried out in salient points along the forest boundary. Other surveyed coordinates received from colliery authorities of Raigarh Area of SECL vide letter number: SECL/GM/RGH/Envt.&Forest/ 2015/114, dated 01-07-2015 which are included in the annexures of this report (Annexures I, II, III, & IV).

2.0 Background

In India, major percentage of power is being produced by thermal power stations where coal plays a very vital role. With the growing concern for increasing power production, the thrust is on increasing the coal production on coal producing companies, such as SECL.

The coal demand for other industrial and domestic consumption has also increased over the years. The coal producing companies, in general are hard-pressed and they are feeling constraints as many of their mines are reaching the limits of their allotted land.

In order to increase coal production, either the existing mines are to be expanded or new mines are to be opened. Some portion of the coal bearing area is falling in forest areas, for which forest clearance is required so that mining can be done in those areas.

To check irrational exploitation of forest and to maintain the Ecological Balance, Forest (Conservation) Act, 1980 was enacted. Under this act, no forest land can be used for non forestry purpose without the prior approval of central government.

Therefore, all proposals of diversion of such areas to any non-forest purpose can only be permitted by the central government. The procedure for forest clearance envisaged under the act mandates a two stage approval process.

Stage I: In principal approval: Upon a prima facie review the proposal is either accepted or rejected. If approved the project authority is required to deposit an amount for compensation of the opportunity cost of the forest (NPV, compensatory afforestation, additional expenses towards mitigating probable environmental damage etc.)



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Stage II: Following the deposit of the above mentioned costs, the land is handed over to the project authorities provided they have obtained all other requisite clearances.

The forest boundaries, in general, are marked on cadastral (Khasra) maps. In most cases, the boundaries are demarcated on ground by allottee or project proponent, in collaboration with forest officials. At salient points along the boundary, pillaring/ pegging is also done.

As per the circular of MOEF, one of the pre-requisite for getting clearance of forest land to be diverted is a geo-referenced boundary map in shape file format of the desired forest land.

About 185.017 Ha forest land is falling in the Chhal OC Expn Seam-III (6MTY) project out of which 176.710 Ha is protected forest and 8.307 Ha is in the category of revenue forest (CJJ/BJJ). SECL applied for diversion of forest land to MoEF. The forest land diversion proposal has to be submitted online alongwith geo-referenced boundary in shape file after DGPS survey.

3.0 Location

Chhal OC Expn Seam-III (6MTY) project is located in Raigarh Area of SECL which falls in Raigarh district of Chhattisgarh. Nearest township is Raigarh.

4.0 Scope of Services

The scope of services of CMPDI are defined as providing geographical co-ordinates of forest boundary within the leasehold of Chhal OC Expn Seam-III (6MTY) project and preparation of shape file of the forest land which has been requisitioned.

5.0 Methodology

Execution of the job was planned on the basis of plan of the area provided by the project. For the job, DGPS (Differential Global Positioning System) survey was found to be appropriate for determining geographical co-ordinates of forest boundary.

The Global Positioning System (GPS) is a satellite-based location, timing and navigation system in all weather conditions, anywhere on or near the Earth where there is an unobstructed line of sight to four or more GPS satellites. Presently, 30 orbiting satellites of GPS constellation of USA and 24 GLONASS (*Globalnaya navigatsionnaya sputnikovaya sistema* or Global Navigation Satellite System) satellites of Russia are operational for the purpose of GPS survey.

The Global Positioning System is made up of three parts: satellites orbiting the Earth; control and monitoring stations on Earth; and the GPS receivers owned by users. GPS satellites transmit three types of information: the satellite's number, its position in space, and the time.



These signals are picked up by the GPS receiver on ground. With signals from three or more satellites, a GPS receiver can triangulate its location on the ground (i.e., longitude and latitude) from the known position of the satellites. With four or more satellites, a GPS receiver can determine a 3D position (i.e., latitude, longitude, and elevation).

Differential Global Positioning System (DGPS) refers to using two or more GPS receivers to achieve greater positional accuracy. Basic methods of DGPS survey are Static, Rapid-Static, and Real-time Kinematic (RTK).

For our job, post-processed static survey is found to be most suitable. In static surveys, one GPS receiver is used as base station and other GPS receivers can be used as rover stations. Base receiver is stationed at a point of known co-ordinates for longer duration and the rover stations are kept at unknown stations for comparatively shorter duration. Data from base and rovers are then post-processed in GPS data processing software, LEICA GEO-OFFICE 8.2 version, to achieve sub-centimeter level accuracies, especially in case of dual-frequency GPS receivers, which is in possession of CMPDI.

ArcGIS 10.2 version software was found to be suitable for preparation of shape file of the forest land in WGS-84 co-ordinates.

AUTOCAD 2015 software was used for basic digitization and plotting of data generated.

6.0 Survey Instrument

For providing geographical (spherical) co-ordinates of the stations along the boundary, Differential Global Positioning System (DGPS) consisting of one base receiver and one rover receiver were used. Brief specifications of DGPS are as follows:

A)	Instrument:	
	Make	Leica
	Model	Viva
	Signal	GPS: L1, L2 & L5 carrier, CA, L1 P, L2 P, L2 C GLONASS: L1, L2 & L5 carrier, L1 CA, L2CA, L1P, L2 P GALILEO: E2-L1-E1, E5, E6
	Channels	72
	Accuracy:	
	Post Processed Static DGPS	3mm +0.5ppm horizontal, 5mm + 0.5ppm vertical
	Real Time RTK	10mm + 1 ppm horizontal, 15mm + 1 ppm vertical
	Power:	
	Internal Battery	2 Li-Ion, 3900mAh, 7.2V
	Communication:	
	Bluetooth	Bluetooth standard 1.2
	USB	1.1 Version
B)	Software	i) Inbuilt Leica software for data recording ii) Leica Geo Office for data processing



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7.0 Details of Field Activity

- Reconnaissance survey was done after reaching the site prior to taking up actual static DGPS work. Officials from Chhal OC Expn Seam-III (6MTY) project mine were associated during reconnaissance and subsequent DGPS static observation work both at base and rover stations.
- DGPS survey was carried out in Chhal OC Expn Seam-III (6MTY) project, in reference to following stations in the table below, whose location on the ground was shown by the project officials.

Station Name	Co-ordinates as provided to CMPDI by SECL		Observed Geographic Co-ordinates (WGS-84)	
	Easting(m)	Northing (m)	Latitude	Longitude
P-24	2909123.98	898139.93	83° 7' 0.884" E	22° 4' 58.292" N
Q-23	2910129.90	899505.35	83° 7' 35.706" E	22° 5' 42.900" N
Q-24	2910150.38	899505.73	83° 7' 36.421" E	22° 5' 42.916" N
Q-14	2910169.20	900099.76	83° 7' 36.954" E	22° 6' 2.241" N
Q-16	2910224.50	900218.78	83° 7' 38.859" E	22° 6' 6.123" N
Q-1	2910719.53	900327.95	83° 7' 56.115" E	22° 6' 9.770" N
Q-7	2910799.97	900323.14	83° 7' 58.924" E	22° 6' 9.629" N

8.0 Computation

- Data recorded is downloaded from DGPS and processed in computer to get post-processed WGS-84 co-ordinates of the surveyed stations. The co-ordinates of other boundary pillars / pegs are then transformed.
- The geodetic / geographical co-ordinates along forest boundary is tabulated in Table -I.

9.0 Documents Submitted

Following documents are being submitted along with this report:

- Drawing No: RV/EXP/GMT/2015/8
- Soft copy of shape files & kml files in CD.

TABLE - I

**List of Coal Grid and Geographical Co-ordinates (WGS-84)
Forest Boundary of Chhal OC Expn Seam-III (6MTY) project**

Point_ID	East	North	LONG	LAT
P-1	2908910.41	899411.20	83° 6' 53.163" E	22° 5' 39.600" N
P-2	2909004.27	899454.88	83° 6' 56.430" E	22° 5' 41.039" N
P-3	2909342.97	899615.09	83° 7' 8.217" E	22° 5' 46.316" N
P-4	2909586.02	899553.79	83° 7' 16.713" E	22° 5' 44.370" N
P-5	2909786.96	899568.36	83° 7' 23.723" E	22° 5' 44.883" N
P-6	2909956.61	899629.94	83° 7' 29.632" E	22° 5' 46.918" N
P-7	2910130.20	899628.36	83° 7' 35.691" E	22° 5' 46.901" N
P-8	2910034.12	899461.68	83° 7' 32.372" E	22° 5' 41.461" N
P-9	2910008.01	899394.64	83° 7' 31.475" E	22° 5' 39.275" N
P-10	2910008.44	899290.77	83° 7' 31.511" E	22° 5' 35.897" N
P-11	2910118.83	899220.01	83° 7' 35.379" E	22° 5' 33.617" N



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Point_ID	East	North	LONG	LAT
P-12	2910068.78	899052.73	83° 7' 33.667" E	22° 5' 28.166" N
P-13	2909890.16	899082.49	83° 7' 27.426" E	22° 5' 29.099" N
P-14	2909712.98	899120.76	83° 7' 21.235" E	22° 5' 30.310" N
P-15	2909613.09	898895.68	83° 7' 17.795" E	22° 5' 22.969" N
P-16	2909781.66	898860.81	83° 7' 23.686" E	22° 5' 21.868" N
P-17	2910007.21	898884.21	83° 7' 31.553" E	22° 5' 22.673" N
P-18	2910167.84	898799.20	83° 7' 37.177" E	22° 5' 19.939" N
P-19	2910058.61	898447.80	83° 7' 33.438" E	22° 5' 8.488" N
P-20	2909622.13	898394.57	83° 7' 18.216" E	22° 5' 6.672" N
P-21	2909631.02	898356.41	83° 7' 18.534" E	22° 5' 5.432" N
P-22	2909311.87	898196.58	83° 7' 7.429" E	22° 5' 0.171" N
P-23	2909240.53	898140.04	83° 7' 4.952" E	22° 4' 58.318" N
P-24	2909123.98	898139.93	83° 7' 0.884" E	22° 4' 58.292" N
P-25	2909164.70	898346.63	83° 7' 2.262" E	22° 5' 5.023" N
P-26	2909286.76	898428.15	83° 7' 6.504" E	22° 5' 7.698" N
P-27	2909451.85	898553.41	83° 7' 12.240" E	22° 5' 11.805" N
P-28	2909566.96	898589.30	83° 7' 16.250" E	22° 5' 12.995" N
P-29	2909519.61	898710.91	83° 7' 14.572" E	22° 5' 16.941" N
P-30	2909514.21	898737.37	83° 7' 14.378" E	22° 5' 17.801" N
P-31	2909321.69	898781.43	83° 7' 7.649" E	22° 5' 19.196" N
P-32	2909217.64	898704.60	83° 7' 4.034" E	22° 5' 16.677" N
P-33	2909175.54	898659.36	83° 7' 2.574" E	22° 5' 15.197" N
P-34	2909199.78	898591.06	83° 7' 3.435" E	22° 5' 12.980" N
P-35	2909095.70	898508.82	83° 6' 59.819" E	22° 5' 10.285" N
P-36	2908958.45	898372.00	83° 6' 55.058" E	22° 5' 5.808" N
P-37	2908864.27	898264.67	83° 6' 51.794" E	22° 5' 2.298" N
P-38	2908743.90	898129.99	83° 6' 47.622" E	22° 4' 57.894" N
P-39	2908629.80	898164.42	83° 6' 43.632" E	22° 4' 58.991" N
P-40	2908522.78	898203.43	83° 6' 39.889" E	22° 5' 0.239" N
P-41	2908380.23	898252.03	83° 6' 34.904" E	22° 5' 1.792" N
P-42	2908341.54	898412.28	83° 6' 33.520" E	22° 5' 6.997" N
P-43	2908322.21	898514.50	83° 6' 32.824" E	22° 5' 10.318" N
P-44	2908307.59	898593.54	83° 6' 32.297" E	22° 5' 12.886" N
P-45	2908313.96	898688.18	83° 6' 32.499" E	22° 5' 15.965" N
P-46	2908320.85	898766.75	83° 6' 32.723" E	22° 5' 18.522" N
P-47	2908403.88	898858.92	83° 6' 35.601" E	22° 5' 21.536" N
P-48	2908445.36	898902.37	83° 6' 37.040" E	22° 5' 22.958" N
P-49	2908540.71	899009.06	83° 6' 40.345" E	22° 5' 26.447" N
P-50	2908530.86	899081.37	83° 6' 39.985" E	22° 5' 28.797" N
P-51	2908531.30	899217.12	83° 6' 39.972" E	22° 5' 33.212" N
P-52	2908658.00	899204.42	83° 6' 44.397" E	22° 5' 32.824" N
P-53	2908764.41	899191.17	83° 6' 48.114" E	22° 5' 32.414" N
Q-1	2910719.53	900327.95	83° 7' 56.115" E	22° 6' 9.770" N
Q-2	2910717.75	900304.10	83° 7' 56.058" E	22° 6' 8.994" N
Q-3	2910795.38	900299.25	83° 7' 58.769" E	22° 6' 8.851" N
Q-4	2910841.30	900297.24	83° 8' 0.372" E	22° 6' 8.794" N
Q-5	2910881.34	900295.04	83° 8' 1.770" E	22° 6' 8.730" N
Q-6	2910880.46	900316.48	83° 8' 1.735" E	22° 6' 9.427" N
Q-7	2910799.97	900323.14	83° 7' 58.924" E	22° 6' 9.629" N
Q-8	2910437.22	899871.80	83° 7' 46.356" E	22° 5' 54.878" N
Q-9	2910314.63	899859.40	83° 7' 42.080" E	22° 5' 54.451" N
Q-10	2910312.57	899837.07	83° 7' 42.013" E	22° 5' 53.725" N
Q-11	2910228.11	899843.70	83° 7' 39.063" E	22° 5' 53.924" N
Q-12	2910108.15	899851.61	83° 7' 34.875" E	22° 5' 54.158" N
Q-13	2910109.29	899932.87	83° 7' 34.898" E	22° 5' 56.801" N
Q-14	2910169.20	900099.76	83° 7' 36.954" E	22° 6' 2.241" N
Q-15	2910166.22	900121.33	83° 7' 36.846" E	22° 6' 2.942" N
Q-16	2910224.50	900218.78	83° 7' 38.859" E	22° 6' 6.123" N
Q-17	2910275.04	900234.43	83° 7' 40.620" E	22° 6' 6.642" N
Q-18	2910254.27	900179.76	83° 7' 39.907" E	22° 6' 4.860" N
Q-19	2910340.86	900071.24	83° 7' 42.951" E	22° 6' 1.347" N
Q-20	2910381.84	900054.14	83° 7' 44.385" E	22° 6' 0.798" N
Q-21	2910406.95	899982.97	83° 7' 45.277" E	22° 5' 58.488" N
Q-22	2910126.94	899526.69	83° 7' 35.598" E	22° 5' 43.593" N



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Point ID	East	North	LONG	LAT
Q-23	2910129.90	899505.35	83° 7' 35.706" E	22° 5' 42.900" N
Q-24	2910150.38	899505.73	83° 7' 36.421" E	22° 5' 42.916" N
Q-25	2910135.22	899541.70	83° 7' 35.884" E	22° 5' 44.083" N
R_A	2908214.90	900646.55	83° 6' 28.626" E	22° 6' 19.643" N
R_B	2910169.51	901130.76	83° 7' 36.750" E	22° 6' 35.776" N
R_C	2911614.37	901405.95	83° 8' 27.129" E	22° 6' 45.004" N
R_C1	2911794.45	901085.11	83° 8' 33.480" E	22° 6' 34.603" N
R_D	2911840.46	900610.12	83° 8' 35.183" E	22° 6' 19.162" N
R_E	2910950.64	900409.73	83° 8' 4.165" E	22° 6' 12.474" N
R_E1	2910940.21	900339.74	83° 8' 3.816" E	22° 6' 10.195" N
R_F	2910930.83	900082.80	83° 8' 3.541" E	22° 6' 1.837" N
R_G	2910735.44	900089.90	83° 7' 56.720" E	22° 6' 2.030" N
R_H	2910560.35	900089.77	83° 7' 50.608" E	22° 6' 1.992" N
R_I	2910540.19	899964.53	83° 7' 49.931" E	22° 5' 57.914" N
R_J	2910555.38	899894.93	83° 7' 50.476" E	22° 5' 55.654" N
R_K	2910420.90	899739.17	83° 7' 45.814" E	22° 5' 50.561" N
R_L	2910386.62	899569.68	83° 7' 44.653" E	22° 5' 45.042" N
R_M	2910350.85	899552.22	83° 7' 43.408" E	22° 5' 44.467" N
R_N	2910206.79	898894.22	83° 7' 38.517" E	22° 5' 23.037" N
R_N1	2910196.55	898793.48	83° 7' 38.180" E	22° 5' 19.758" N
R_N2	2910102.55	898413.82	83° 7' 34.978" E	22° 5' 7.391" N
R_O	2909682.83	898163.20	83° 7' 20.382" E	22° 4' 59.158" N
R_P	2909682.87	898223.64	83° 7' 20.371" E	22° 5' 1.124" N
R_P1	2909202.12	898048.71	83° 7' 3.630" E	22° 4' 55.340" N
R_P2	2909194.45	897978.50	83° 7' 3.377" E	22° 4' 53.055" N
R_Q	2908740.99	897550.76	83° 6' 47.642" E	22° 4' 39.053" N



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ANNEXURES

Job No.: 560060



SOUTH EASTERN COALFIELDS LIMITED
BILASPUR

OFFICE OF CHIEF OF FOREST (FOREST DEPARTMENT)

Ref. No.: SECL/BSP/FOREST/DGPS/2015/ 88	Date : 03-01-2015
Dealing Clerk:	Name of Officer: A.S.Bapat

Sub: Invitation of offer for preparation of geo-referenced boundary map (in shape file) of 185.017Ha. Forest Land of Chhal OC, Seam III(6MTY) Project, Chhal Sub Area, Raigarh Area, SECL.

Proposals for diversion of 185.017Ha. forest land for Chhal OC, Seam III(6MTY) Project, Raigarh Area is in the process of getting the forestry clearance. DGPS survey and preparation of shape file of forest boundary is mandatory with the proposal for forestry clearance.

In this connection a request is received from Chhal Sub Area, Raigarh Area vide letter no. SECL/CHHAL-CSA/SAM/14-15/13 dated 02-01-2015 for its proposal of diversion of 185.017Ha. Forest land.

You are requested to submit your offer for carrying out the above said work.

Submitted through the General Manager (P&P), SECL, Bilaspur.

Chief Manager (Min),
P&P/Forest

General Manager
P&P, SECL, Bilaspur

RD-V
CMPDIL, Bilaspur

For Darenin Singh Sr. manager (Gen)



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and ISO 9001
Company

सेन्ट्रल माईन प्लानिंग एण्ड डिजाइन इन्स्टीट्यूट लि.
कोल इंडिया लिमिटेड की अनुषंगी कंपनी/भारत सरकार का एक लोक उपक्रम
क्षेत्रीय संस्थान-5, एसईसीएल कॉम्प्लेक्स, सीपत रोड, बिलासपुर 495006 (छ.ग)

Central Mine Planning & Design Institute Limited

A Subsidiary of Coal India Ltd/ A Govt. of India Public sector Undertaking

CIN:U14292JH1975GO1001223

RI-V, SECL Complex, Seepat Road, Bilaspur (CG)- 495006

ई-मेल / e-mail: ri5@cmpdi.co.in / cmpdi5@rediffmail.com



Tel: 07752-246481-492

Fax: 07752-246481

NO.RV/EXP/2015/DGPS/ 864

प्रति,

मुख्य महाप्रबंधक (यो एवं परि)

एसईसीएल, सीपत रोड

बिलासपुर (छ.ग)

Dated 30/03/2015

Sub: Preparation of Geo-referenced Boundary Map (in shape file) of Forest Land Chhal OC, SEAM-III(6MTY) Project, Raigarh Area, SECL.
Ref: SECL/BSP/FOREST/DGPS/2015/80 Dated 03/01/2015

Dear Sir,

We shall carry out the subject assignment. The scope of services of CMPDI shall be:-

- DGPS Survey for ascertaining WGS84 Co-ordinates of forest pillars fixed by SECL on ground.
- Preparation of shape file of the forest boundary &
- Preparation of report of co-ordinates of forest pillars (in WGS84) with map.

SECL shall arrange to provide the following "input data / information" for carrying out the subject assignment:-

- Demarcation and fixing of forest boundary pillars on ground and supply of its local / coal-grid co-ordinates with location.

The subject assignment would be completed within 04 (Four) weeks from the 'zero' date. The 'zero' date for this assignment would be from the date of receipt of "input data/information" towards the above work or the date of receipt of work order from SECL, whichever is later.

We shall require 35 (Thirty Five) EDs for carrying out the subject assignment. The ED rate as applicable for that particular financial year (s) in which the EDs are booked shall be charged. In addition, service tax on total consultancy fee and education cess on service tax shall also be payable by client. The current rates of service tax & education cess are 12% & 3% respectively. The estimated ED rate for CIL and its subsidiaries is Rs.17383.00 for FY 2014-15.

We request you to kindly send your acceptance at your earliest convenience to enable us to take up the assignment.

धन्यवाद

भवदीय,

क्षेत्रीय निदेशक

सूचनार्थ:

- निदेशक (तकनिकी/पीएण्डपी), एसईसीएल, सीपत रोड, बिलासपुर (छ.ग)
- Chief Manager (Mining) P&P/Forest, एसईसीएल, Bilaspur
- महाप्रबंधक (व्यवसाय विकास), सी.एम.पी.डी.आई, (मुख्यालय) गोंडवाना प्लेस, कॉफे रोड, रांची
- महाप्रबंधक (Geomatics), सी.एम.पी.डी.आई, (मुख्यालय) गोंडवाना प्लेस, कॉफे रोड, रांची

3

113
02/01/15



South Eastern Coalfields Limited
"A Mini Ratna Company"
(A Subsidiary of Coal India Ltd.)
Chhote Atarmuda, Raigarh-495006
G.M. Office (forest & Env't)
Website: www.secl.gov.in

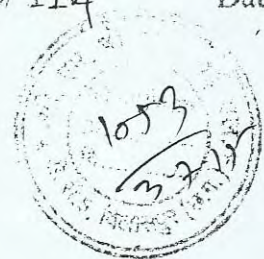
fax NO.- 07762-223152
Tel NO.- 07762- 222008
M.NO 9425282388
E-mail -seclrgh @ gmail.com

CIN-U10102CT1985GO1003161

Ref: - SECL/GM/RGH/Env't. & forest/2015/ 114

Date: -01/07/2015

To
✓ The Chief Manager (Forest),
SECL, HQ. BILASPUR



Sub:-Submission of Co- ordinate survey data of forest land for Chhal OC,
Seam- III, 6 MTY.

Dear Sir,

With reference to the above subject matter please find enclosed herewith the data of co- ordinate Survey of forest land in respect of Chhal OC, Seam III, 6 MTY.

This is for your kind information & necessary action please.

S.O. (Env't. & Forest)
Raigarh Area.

Copy to:

- Area General Manager Raigarh Area
- GM(Opr), Raigarh Area
- SAM Chhal Sub Area.
- N.O. (Env't), Chhal, Baroud & Jampali OCP,
- Office copy.

Forwarded to RD RI V

HOD (Env't.)
3.7.15

Smt. Damini Singh
3.7.18

1434
03/07/15
1.3 03.17.2015



साउथ इस्टर्न कोलफील्ड्स लिमिटेड

बिलासपुर

कार्यालय महाप्रबंधक (योजना एवं परियोजना) विभाग

फाइल सं: एस.ई.सी.एल./बिलासपुर/यो.एवं.परि/ 4-161

दिनांक: 30-03-2015

लिपिक का नाम:

अधिकारी का नाम: अक्षय श्री. बापट

विषय: डी.जी.पी.एस. सर्वे करवाने हेतु निम्नलिखित खदानों की सूची सी.एम.पी.डी.आई. की वार्षिक कृति योजना 2015-16 (Annual Action Plan 2015-16) में सम्मिलित करने बाबत।

एसईसीएल के वन भूमि प्रत्यावर्तन प्रकरणों में DGPS सर्वे करना अनिवार्य हो गया है। छत्तीसगढ़ शासन द्वारा कोल परियोजनाओं के DGPS सर्वे हेतु CMPDI के नामित किया है। क्षेत्रों से DGPS सर्वे करने हेतु प्रस्ताव प्राप्त हो रहे हैं। हर प्रस्ताव को अलग-अलग अनुमोदन हेतु प्रेषित करने में काफी समय लगता है। महाप्रबंधक (यो./परी.) एसईसीएल द्वारा क्षेत्रीय निदेशक, RI-V बिलासपुर को भेजे दि. 23-01-2015 के पत्र क्र. 34 (छायाप्रति संलग्न) में भी " DGPS Survey for delineation of forest boundary is to be taken up as and when required, list for the same to be sent by Forest Department shortly." इसी तारतम्य में जिन प्रकरणों/ खदानों में DGPS सर्वे की आवश्यकता है उनकी सूची निम्नानुसार है;

#	Name of proposal	Name of Area	Area (in Ha.)	State	stage for which applied
1	Baroud OC Expn. Mine	Raigarh	236.56	CG	I
2	Chal OC Expn. III, Seam	Raigarh	185.02	CG	I
3	Ambica OC	Korba	6.28	CG	I
4	Kartali East OC	Korba	406.30	CG	I
5	Bagdeva UG	Korba	108.48	CG	I
6	Anjan Hill	Chirimiri	10.82	CG	I
7	Chirimiri OC Mine	Chirimiri	12.00	CG	I
8	West Chirimiri Colliery	Chirimiri	11.00	CG	I
9	West Chirimiri Colliery	Chirimiri	5.50	CG	I
10	West Chirimiri Colliery	Chirimiri	101.40	CG	I
11	Dugga OC	Bhatgaon	154.65	CG	I
12	Mahamaya UG	Bhatgaon	196.19	CG	I
13	Bhatgaon UG	Bhatgaon	230.78	CG	I
14	Kalyani UG	Bhatgaon	130.68	CG	I
15	Katkona Colliery	Baikunthpur	200.21	CG	I

[Handwritten signatures and dates]
 6.4.15

[Handwritten signature] Shri. Dhanu Singh S. Manoj (Gen)

16	Binkara UG	Bishrampur	35.10	CG	I
17	Rajnagar OC	Hasdeo	169.31	MP	I
18	Amritdhara	J&K		MP	I
19	Malachua	Johilla		MP	I

इसके अलावा अन्य 10 खदानें आवश्यकतानुसार।

प्रस्तावित सूची अनुमोदन पश्चात CMPDI को वार्षिक कृति योजना 2015-16 में सम्मिलित करने हेतु अग्रेषित की जाएगी।

अतः उपरोक्तानुसार प्रस्ताव अनुमोदनार्थ प्रस्तुत है।

संलग्न : यथोपरि

मुख्य प्रबंधक (खनन)

महाप्रबंधक (यो./परी.)/एसईसीएल, बिलासपूर

निदेशक तकनीकी (संचालन)

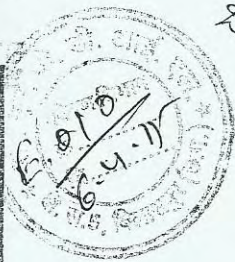
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(एसई सी एल)

असिस्टेंट कमिश्नर (खनन) P & P

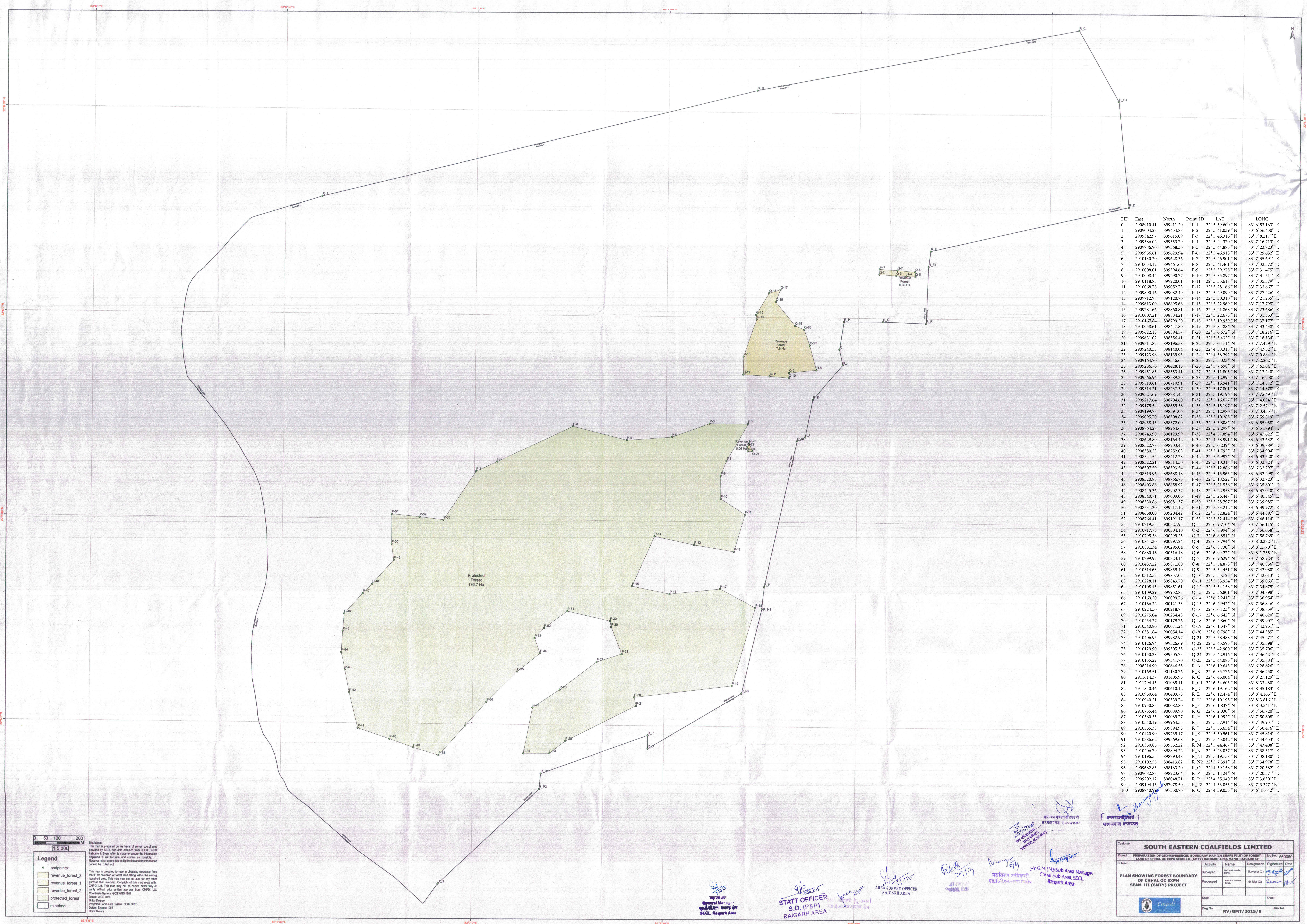
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महाप्रबंधक (यो./परी.)

शे. नि. R1-V



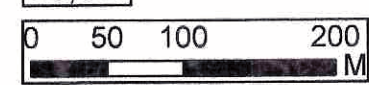
क्रमांक ...668
दिनांक 6.4.15



PID	Shape *	Re/Name	Area	Khasra	Village	Lat	Long
0	Point	55.953575	410	Badhapal	22° 5' 33.788' N	83° 8' 10.035' E	
1	Point	55.953575	410	Badhapal	22° 5' 33.030' N	83° 8' 14.338' E	
2	Point	55.953575	410	Badhapal	22° 5' 34.724' N	83° 8' 18.434' E	
3	Point	55.953575	410	Badhapal	22° 5' 36.140' N	83° 8' 21.197' E	
4	Point	55.953575	410	Badhapal	22° 5' 38.210' N	83° 8' 23.445' E	
5	Point	55.953575	410	Badhapal	22° 5' 33.980' N	83° 8' 23.047' E	
6	Point	55.953575	410	Badhapal	22° 5' 30.500' N	83° 8' 24.665' E	
7	Point	55.953575	410	Badhapal	22° 5' 30.444' N	83° 8' 27.454' E	
8	Point	55.953575	410	Badhapal	22° 5' 24.319' N	83° 8' 28.210' E	
9	Point	55.953575	410	Badhapal	22° 5' 20.149' N	83° 8' 26.774' E	
10	Point	55.953575	410	Badhapal	22° 5' 16.444' N	83° 8' 26.199' E	
11	Point	55.953575	410	Badhapal	22° 5' 12.672' N	83° 8' 26.764' E	
12	Point	55.953575	410	Badhapal	22° 5' 7.607' N	83° 8' 25.989' E	
13	Point	55.953575	410	Badhapal	22° 4' 4.539' N	83° 8' 14.739' E	
14	Point	55.953575	410	Badhapal	22° 5' 58.652' N	83° 8' 16.073' E	
15	Point	55.953575	410	Badhapal	22° 5' 1.702' N	83° 8' 14.989' E	
16	Point	55.953575	410	Badhapal	22° 5' 2.159' N	83° 8' 9.231' E	
17	Point	55.953575	410	Badhapal	22° 5' 8.125' N	83° 8' 9.564' E	
18	Point	55.953575	410	Badhapal	22° 5' 7.683' N	83° 8' 9.333' E	
19	Point	55.953575	410	Badhapal	22° 5' 1.012' N	83° 8' 7.349' E	
20	Point	55.953575	410	Badhapal	22° 5' 2.669' N	83° 8' 1.916' E	
21	Point	55.953575	410	Badhapal	22° 5' 5.007' N	83° 8' 2.204' E	
22	Point	55.953575	410	Badhapal	22° 5' 8.427' N	83° 8' 1.733' E	
23	Point	55.953575	410	Badhapal	22° 5' 15.239' N	83° 8' 3.599' E	
24	Point	55.953575	410	Badhapal	22° 5' 22.782' N	83° 8' 4.140' E	
25	Point	55.953575	410	Badhapal	22° 5' 23.627' N	83° 8' 12.789' E	
26	Point	55.953575	410	Badhapal	22° 5' 33.788' N	83° 8' 10.035' E	

PID	Shape *	Ext	North	Point_ID	LAT	LONG
1	Point	2908910.409	899411.205	R1	22° 5' 39.600' N	83° 6' 53.163' E
2	Point	2908924.217	899444.882	R2	22° 5' 41.039' N	83° 6' 56.403' E
3	Point	2908942.872	899615.087	R3	22° 5' 46.318' N	83° 7' 6.217' E
4	Point	2908968.018	899653.794	R4	22° 5' 44.370' N	83° 7' 18.713' E
5	Point	2908978.667	899668.357	R5	22° 5' 44.883' N	83° 7' 23.727' E
6	Point	2908966.605	899629.938	R6	22° 5' 46.918' N	83° 7' 29.832' E
7	Point	2910101.204	899629.388	R7	22° 5' 46.907' N	83° 7' 30.891' E
8	Point	2910024.118	899461.677	R8	22° 5' 41.461' N	83° 7' 33.772' E
9	Point	2910008.009	899384.638	R9	22° 5' 38.278' N	83° 7' 31.470' E
10	Point	2910008.442	899260.714	R10	22° 5' 35.897' N	83° 7' 31.511' E
11	Point	2910118.825	899220.014	R11	22° 5' 33.617' N	83° 7' 33.792' E
12	Point	2909985.778	899002.73	R12	22° 5' 28.189' N	83° 7' 33.607' E
13	Point	2909992.157	899002.494	R13	22° 5' 29.089' N	83° 7' 27.408' E
14	Point	2909712.985	899100.782	R14	22° 5' 30.310' N	83° 7' 21.335' E
15	Point	2909613.085	898992.979	R15	22° 5' 32.969' N	83° 7' 17.780' E
16	Point	2909791.664	898860.81	R16	22° 5' 21.868' N	83° 7' 23.689' E
17	Point	2910007.215	898864.213	R17	22° 5' 22.879' N	83° 7' 31.503' E
18	Point	2910187.84	898799.302	R18	22° 5' 19.939' N	83° 7' 31.777' E
19	Point	2910058.655	898447.804	R19	22° 5' 8.488' N	83° 7' 33.438' E
20	Point	2909922.128	898394.389	R20	22° 5' 8.677' N	83° 7' 18.216' E
21	Point	2909651.021	898366.414	R21	22° 5' 6.432' N	83° 7' 18.534' E
22	Point	2909311.871	898196.079	R22	22° 5' 0.171' N	83° 7' 7.429' E
23	Point	2909240.534	898140.044	R23	22° 4' 4.907' E	83° 7' 4.907' E
24	Point	2909123.978	898138.028	R24	22° 4' 58.282' N	83° 7' 0.844' E
25	Point	2909164.703	898048.629	R25	22° 4' 5' 0.023' N	83° 7' 2.662' E
26	Point	2909280.761	898028.15	R26	22° 4' 5' 0.688' N	83° 7' 6.504' E
27	Point	2909451.848	898053.411	R27	22° 4' 5' 11.805' N	83° 7' 12.340' E
28	Point	2909496.953	898059.297	R28	22° 4' 5' 12.969' N	83° 7' 16.250' E
29	Point	2909519.61	898103.906	R29	22° 4' 5' 16.941' N	83° 7' 14.572' E
30	Point	2909614.208	898137.368	R30	22° 4' 5' 17.897' N	83° 7' 14.378' E
31	Point	2909621.887	898191.433	R31	22° 4' 5' 18.189' N	83° 7' 7.649' E
32	Point	2909621.836	898104.802	R32	22° 4' 5' 18.677' N	83° 7' 4.004' E
33	Point	2909719.738	898099.381	R33	22° 4' 5' 15.677' N	83° 7' 2.547' E
34	Point	2909788.778	898091.058	R34	22° 4' 5' 12.969' N	83° 7' 3.435' E
35	Point	2909006.696	898038.835	R35	22° 4' 5' 10.285' N	83° 6' 59.819' E
36	Point	2909550.452	898072.501	R36	22° 4' 5' 8.900' N	83° 6' 56.584' E
37	Point	2909884.274	898084.671	R37	22° 4' 5' 2.268' N	83° 6' 53.794' E
38	Point	2909743.902	898129.988	R38	22° 4' 5' 8.864' N	83° 6' 47.622' E
39	Point	2909829.801	898154.418	R39	22° 4' 5' 58.917' N	83° 6' 43.824' E
40	Point	2909822.778	898033.433	R40	22° 4' 5' 0.239' N	83° 6' 38.889' E
41	Point	2909880.234	898032.538	R41	22° 4' 5' 7.762' N	83° 6' 34.901' E
42	Point	2909341.536	898412.281	R42	22° 4' 5' 6.997' N	83° 6' 33.520' E
43	Point	2909322.209	898514.503	R43	22° 4' 5' 10.319' N	83° 6' 32.844' E
44	Point	2909307.753	898593.542	R44	22° 4' 5' 2.889' N	83° 6' 32.397' E
45	Point	2908313.958	898688.18	R45	22° 4' 5' 15.983' N	83° 6' 32.499' E
46	Point	2909320.851	898786.749	R46	22° 4' 5' 15.522' N	83° 6' 32.727' E
47	Point	2909402.878	898888.418	R47	22° 4' 5' 15.522' N	83° 6' 35.651' E
48	Point	2909445.364	898902.368	R48	22° 4' 5' 22.958' N	83° 6' 37.047' E
49	Point	2909440.711	899009.257	R49	22° 4' 5' 28.447' N	83° 6' 40.341' E
50	Point	2909502.957	899081.371	R50	22° 4' 5' 28.797' N	83° 6' 38.989' E
51	Point	2909631.301	899217.119	R51	22° 4' 5' 33.212' N	83° 6' 39.972' E
52	Point	2909692.897	899204.423	R52	22° 4' 5' 32.884' N	83° 6' 44.307' E
53	Point	2909764.414	899191.189	R53	22° 4' 5' 32.414' N	83° 6' 48.114' E
54	Point	2910115.626	900037.864	O-1	22° 4' 5' 37.792' N	83° 7' 56.119' E
55	Point	2910171.762	900034.104	O-2	22° 4' 5' 8.994' N	83° 7' 56.058' E
56	Point	2910785.38	900299.245	O-3	22° 4' 5' 8.831' N	83° 7' 58.789' E
57	Point	2910841.353	900397.341	O-4	22° 4' 5' 7.768' N	83° 7' 53.772' E
58	Point	2910881.338	900395.039	O-5	22° 4' 5' 6.730' N	83° 7' 51.770' E
59	Point	2910882.467	900316.476	O-6	22° 4' 5' 4.977' N	83° 7' 51.739' E
60	Point	2910798.873	900333.143	O-7	22° 4' 5' 6.629' N	83° 7' 58.924' E
61	Point	2910437.222	899871.803	O-8	22° 4' 5' 54.878' N	83° 7' 46.350' E
62	Point	2910134.626	899895.401	O-9	22° 4' 5' 44.491' N	83° 7' 42.987' E
63	Point	2910312.572	899837.071	O-10	22° 4' 5' 53.725' N	83° 7' 42.013' E
64	Point	2910228.109	899845.702	O-11	22° 4' 5' 53.924' N	83° 7' 38.003' E
65	Point	2910128.154	899851.811	O-12	22° 4' 5' 54.188' N	83° 7' 34.979' E
66	Point	2910109.288	899852.871	O-13	22° 4' 5' 56.801' N	83° 7' 34.889' E
67	Point	2910168.203	900098.76	O-14	22° 4' 5' 2.247' N	83° 7' 36.594' E
68	Point	2910168.223	900121.33	O-15	22° 4' 5' 2.942' N	83° 7' 36.846' E
69	Point	2910224.498	900218.783	O-16	22° 4' 5' 6.129' N	83° 7' 38.809' E
70	Point	2910271.035	900244.834	O-17	22° 4' 5' 6.842' N	83° 7' 40.807' E
71	Point	2910254.267	900178.76	O-18	22° 4' 5' 4.860' N	83° 7' 39.907' E
72	Point	2910340.899	900271.243	O-19	22° 4' 5' 1.547' N	83° 7' 42.561' E
73	Point	2910381.836	900264.137	O-20	22° 4' 5' 0.768' N	83° 7' 44.385' E
74	Point	2910406.951	899882.967	O-21	22° 4' 5' 58.488' N	83° 7' 45.277' E
75	Point	2910128.938	899828.686	O-22	22° 4' 5' 43.987' N	83° 7' 35.586' E
76	Point	2910129.604	899805.348	O-23	22° 4' 5' 42.900' N	83° 7' 35.766' E
77	Point	2910150.35	899805.728	O-24	22° 4' 5' 42.919' N	83° 7' 36.421' E
78	Point	2910335.215	899841.294	O-25	22° 4' 5' 44.047' N	83° 7' 36.864' E
79	Point	2909821.897	900048.548	R_A	22° 4' 5' 19.943' N	83° 7' 28.629' E
80	Point	291194.371	901405.949	R_C	22° 4' 5' 45.004' N	83° 7' 27.129' E
81	Point	2911794.452	901085.114	R_C1	22° 4' 5' 34.603' N	83° 7' 33.480' E
82	Point	2911842.453	900010.124	R_C1	22° 4' 5' 19.152' N	83° 7' 35.183' E
83	Point	2910950.641	900406.729	R_E	22° 4' 5' 12.474' N	83° 6' 41.695' E
84	Point	2910940.219	900339.738	R_E1	22° 4' 5' 10.180' N	83° 6' 33.816' E
85	Point	2910902.848	900462.884	R_F	22° 4' 5' 1.833' N	83° 6' 33.541' E
86	Point	2910795.438	900089.901	R_G	22° 4' 5' 2.030' N	83° 6' 56.720' E
87	Point	2910902.343	900083.77	R_H	22° 4' 5' 1.889' N	83° 6' 56.897' E
88	Point	2910540.194	899964.526	R_I	22° 4' 5' 57.914' N	83° 7' 49.931' E
89	Point	2910555.383	899994.933	R_J	22° 4' 5' 58.654' N	83° 7' 50.476' E
90	Point	2910402.902	899786.189	R_K	22° 4' 5' 50.947' N	83° 7' 45.814' E
91	Point	2910386.624	899599.581	R_L	22° 4' 5' 45.042' N	83° 7' 44.653' E
92	Point	2910392.847	899492.221	R_M	22° 4' 5' 44.487' N	83° 7' 43.498' E
93	Point	2910206.793	899894.224	R_N	22° 4' 5' 23.037' N	83° 7' 38.517' E
94	Point	2910158.654	899793.477	R_M1	22° 4' 5' 19.758' N	83° 7' 38.180' E
95	Point	2910102.95	899413.822	R_N2	22° 4' 5' 3.901' N	83° 7' 34.978' E
96	Point	2906682.628	898163.197	R_O	22° 4' 5' 58.158' N	83° 7' 30.382' E
97	Point	2906682.874	898223.638	R_P	22° 4' 5' 1.124' N	83° 7' 26.277' E
98	Point	2906682.124	898462.711	R_P1	22° 4' 5' 6.340' N	83° 7' 3.850' E
99	Point	2909194.454	897978.503	R_P2	22° 4' 5' 53.059' N	83° 7' 3.377' E
100	Point	2908740.988	897550.756	R_Q	22° 4' 5' 38.083' N	83° 6' 47.842' E

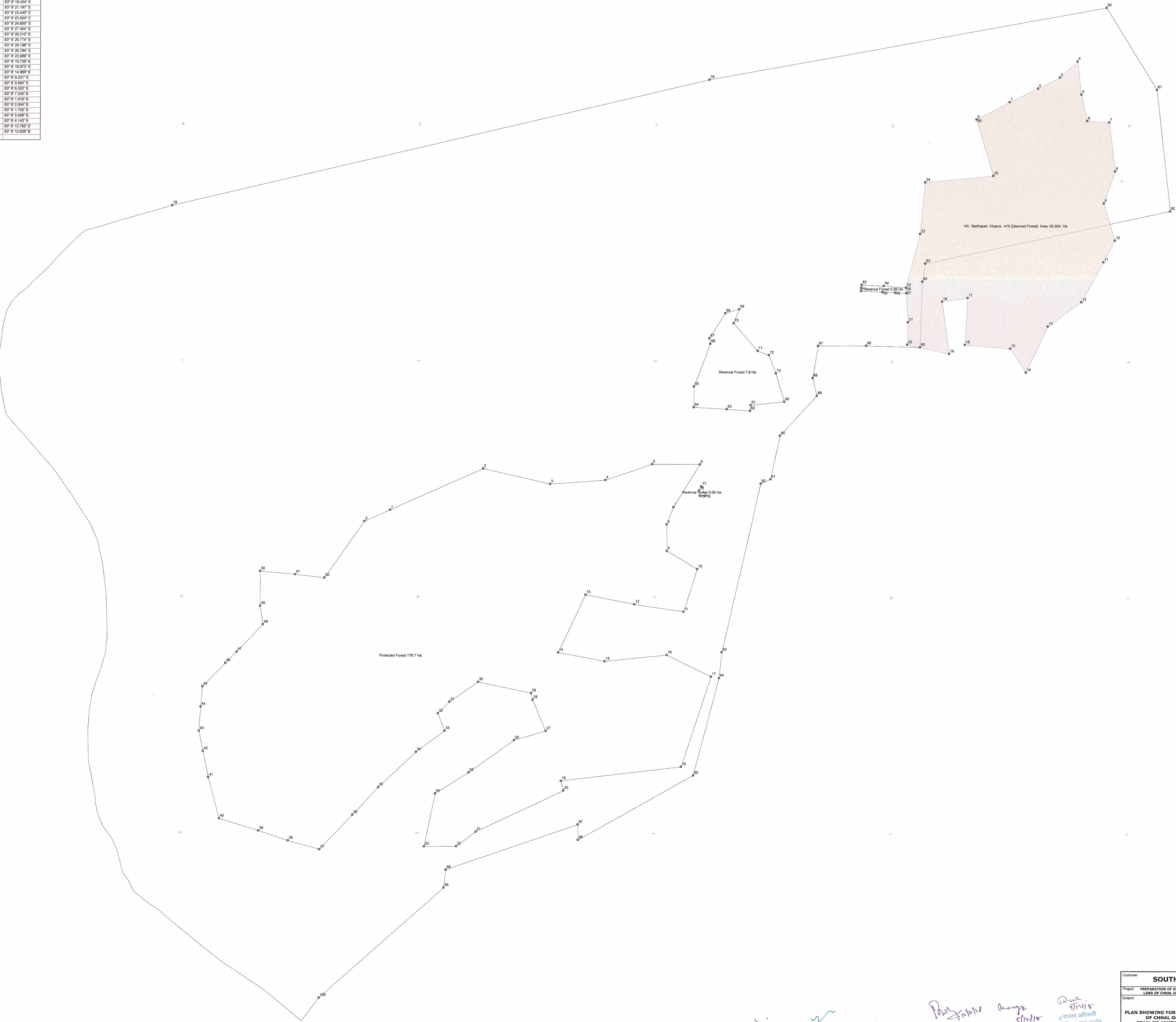
1:5,000



Legend

- pl_revenue_forest_4
- pl_revenue_forest_3
- pl_revenue_forest_2
- pl_revenue_forest_1
- pl_protected_forest
- pl_minebind

ID	Shape	RefName	Area	Khasra	Village	Lat	Long
0	Point		55.955375	410	Bachhapal	22° 8' 30.780" N	83° 8' 10.639" E
1	Point		55.955375	410	Bachhapal	22° 8' 33.030" N	83° 8' 14.838" E
2	Point		55.955375	410	Bachhapal	22° 8' 34.752" N	83° 8' 18.434" E
3	Point		55.955375	410	Bachhapal	22° 8' 36.148" N	83° 8' 21.197" E
4	Point		55.955375	410	Bachhapal	22° 8' 38.210" N	83° 8' 23.449" E
5	Point		55.955375	410	Bachhapal	22° 8' 33.385" N	83° 8' 23.924" E
6	Point		55.955375	410	Bachhapal	22° 8' 30.830" N	83° 8' 24.660" E
7	Point		55.955375	410	Bachhapal	22° 8' 35.444" N	83° 8' 27.454" E
8	Point		55.955375	410	Bachhapal	22° 8' 24.218" N	83° 8' 28.210" E
9	Point		55.955375	410	Bachhapal	22° 8' 20.148" N	83° 8' 28.774" E
10	Point		55.955375	410	Bachhapal	22° 8' 15.444" N	83° 8' 28.780" E
11	Point		55.955375	410	Bachhapal	22° 8' 12.872" N	83° 8' 26.764" E
12	Point		55.955375	410	Bachhapal	22° 8' 9.607" N	83° 8' 23.989" E
13	Point		55.955375	410	Bachhapal	22° 8' 4.518" N	83° 8' 19.759" E
14	Point		55.955375	410	Bachhapal	22° 8' 58.852" N	83° 8' 16.973" E
15	Point		55.955375	410	Bachhapal	22° 8' 1.702" N	83° 8' 14.888" E
16	Point		55.955375	410	Bachhapal	22° 8' 2.168" N	83° 8' 9.231" E
17	Point		55.955375	410	Bachhapal	22° 8' 1.120" N	83° 8' 9.364" E
18	Point		55.955375	410	Bachhapal	22° 8' 7.865" N	83° 8' 6.333" E
19	Point		55.955375	410	Bachhapal	22° 8' 1.012" N	83° 8' 7.249" E
20	Point		55.955375	410	Bachhapal	22° 8' 2.169" N	83° 8' 1.918" E
21	Point		55.955375	410	Bachhapal	22° 8' 5.020" N	83° 8' 2.004" E
22	Point		55.955375	410	Bachhapal	22° 8' 9.427" N	83° 8' 1.739" E
23	Point		55.955375	410	Bachhapal	22° 8' 18.238" N	83° 8' 3.509" E
24	Point		55.955375	410	Bachhapal	22° 8' 22.782" N	83° 8' 4.142" E
25	Point		55.955375	410	Bachhapal	22° 8' 23.637" N	83° 8' 12.782" E
26	Point		55.955375	410	Bachhapal	22° 8' 30.780" N	83° 8' 10.639" E



1:5,000

0 50 100 200
M

Legend

- pt_revenue_forest_4
- bdpoints1
- revenue_forest_4
- revenue_forest_3
- revenue_forest_2
- revenue_forest_1
- protected_forest
- minebnd

Disclaimer:
This map is prepared on the basis of survey coordinates provided by SEC, and data obtained from LECA DGP's reference. Every effort is made to ensure the information displayed is as accurate and current as possible. However, no warranty is made for any errors or omissions or for any use of the map without prior written approval from CMSPD Ltd. Coordinate System: UTM 18Q Datum: WGS 1984 Units: Meters

General Manager
Railways
Rajgarh Area

उपवन प्रभुत्वधिकारी
परमवनायक, उपवन भद्रदल

Dy.G.M.(M)/Sub Area Manager
Chhal Sub Area, SEC,
Rajgarh Area

पर्यावरण अधिकारी
एसई सी एल - रायगढ़ क्षेत्र

पर्यावरण अधिकारी
एसई सी एल - रायगढ़ क्षेत्र

SOUTH EASTERN COALFIELDS LIMITED				
Project	PREPARATION OF GEO-REFERENCED BOUNDARY MAP (IN SHAPE FILE) OF FOREST LAND OF CHHAL OC EXPN SEAN-III (GNTY) RAJGARH AREA HANOI-RAJGARH CP			Auto No: 660060
Subject	PLAN SHOWING FOREST BOUNDARY OF CHHAL OC EXPN SEAN-III (GNTY) PROJECT			
Activity	Name	Designation	Signature	Date
Surveyed	Dr. K. S. Datta	Surveyor (C)	[Signature]	23/11/18
Processed	Dr. K. S. Datta	St. Mgr (C)	[Signature]	23/11/18
Scale	Sheet			
Drawn No:	RV/GMT/2015/8			Rev No: