

## **Name of Project : COAL MINE PROJECT (CMPDI)**

Survey of India is going to generate up-to-date digital topographical maps of Major Indian Coal fields covering an area of 30,488 sq.km. in five years time for Central Mine Planning & Design Institute (CMPDI), a subsidiary of Coal India Limited using aerial photographs and adequate ground checks.

To generate the Topographical maps of the major coalfields on 1:5000 scale with 2 meter contour interval in Plains (in case of hilly terrain contour interval may be 3-5 meter as practical) in GIS digital format based on Digital Photogrammetric Techniques using high resolution aerial photographs and adequate ground verification.

Survey of India also impart on-job training on data processing and interpretation to 4 scientists of CMPDI for three months at the initial stage on preparation of Topographical maps based on aerial photographs using digital photogrammetric technique.

### **Objective :**

Preparation of Updated Topographical Maps of major Indian coalfields based on remote sensing technique for better planning and optimal utilization of the coal resources.

### **Role of Survey Of India :**

Survey of India is going to generate up-to-date digital topographical maps of 27 Major Indian Coal fields.

Chhattisgarh, Jharkhand, Madhya Pradesh, Maharashtra & Goa, Meghalaya & Arunachal Pradesh, Orissa and W.B & Sikkim GDCs are involved in this project.

### **Commenced :**

The commencing date of the project was 14.07.2009, which is likely to be completed by December 2016.

### **Estimated cost :**

**Rs. 110.53 crore**

Amount received from CMPDI is **Rs. 38.30 crore**

Total expenditure upto FY 2014-15 is **Rs. 56.96 crore.** (As per expenditure statement received from various GDCs).

**Specification:**

- i. Scale : 1:5,000
- ii. Contour interval : 2m (3-5m in hilly terrain as practicable )
- iii. Coordinate system - Projection – UTM Datum – WGS 84
- iv. Accuracy required – Horizontal – 1.5m Vertical 1m
- v. Data format - Arc GIS & Auto CAD (.dwg)

**Deliverables :**

- a. Three sets of prints on high quality, non-shrinkable paper
- b. One set of print on non tearable, polyester transparent sheet
- c. Two sets of soft copy for each map on CD
- d. One set of soft copy of patterned file on .pdf format and printing rights by CMPDI.

**Achievement :**

Ground Control Points (Plan & height) and Aerial Photography for Phase-I comprising 10 Coal Fields. (Bisrampur, Lakhanpur, Korba, Chirimiri, Sonhat, Sohagpur, Talcher, Hasda, Arand, I.B. Valley & Mand–Raigarh) has been completed and Aerial Triangulation and 2D feature extraction is under process. Aerial Photography for Phase-II comprising of 17 Coal Fields (Ramkola-Tatapani, Rajmahal, Raniganj, Jharia, East Bokaro, West Bokaro, Ramgarh, North Karanpura, South Karanpura, Auranga, Singrauli, Wardha Valley, Makum) has also been completed. High resolution stereo Satellite Imagery was used for Makum coalfield. Field work of above coalfield is commenced from September 2015.

Regarding Talcher coalfield, it was decided to leave the major gap area sheets as field work is not feasible because the area is disturbed. But the CMPDI desired that small gap areas may be bridged from other data sources. Hence OGDC will complete this coalfield accordingly.

**PERCENTAGE OF WORK DONE OF CMPDI PROJECT**

100	100%	100%	65%	71%	24%	21%	19%	9%	8%	0%	0%
90											
80											
70											
60											
50											
40											
30											
20											
10											
%	Const. of pillar	DT Levelling	ST Levelling	Block Control	2D FE	3D FE	Field Verification	Editing & Map Prod.	Submission of 1 <sup>st</sup> proof	GIS Value addn.	Final Deliverables
	100	100	65	71	24	21	19	9	8	0	0