

**CHAPTER X**  
**PROGRESSIV MINE CLOSURE PLAN**

**10.1 Stage I : Year 01 to 08**

Parameters are as follows

Seams to be worked :	Thickness (m)	
	IC	3.5 to 3.8 (thickness revised by combining with IB)
	IIA	2.1 to 2.2
Parting between seam:	2.9 to 3m	(interrelation of shale & sandstone)
Place :	North of dyke	
Sectors :	21 and 25	
Depth from surface :	Starting 175m (Sector 21) Max. 290m (sector 25)	
Landing :	Floor of seam IIA at a depth of 175m.	
Gradient of seam floor:	1 in 8 (7°)	
Sequence of development :	Simultaneous development of seam IIA & IC maintaining verticality of pillars and galleries and min. thickness of 3m. for parting.	
Coal winning :	Solid blasting	
Coal transport :	<b>Seam IIA</b>	<b>Seam IC</b>
	<b>Face :</b>	Low ht. LHD loading into gathering belt
	<b>Gate:</b>	Belt conveyor
	<b>Trunk :</b>	Belt conveyor in Seam IIA carrying coal from Seam IC - through strata bunkers constructed in staple pits.
No. of districts :	2 No. in Seam IIA	2 Nos. in Seam IC
Daily output :	6 heading panel in Seam IIA : 250 to 300 TPD	
By development :	6 heading panel in Seam IC : 350 to 400 TPD	
and by depillaring	Total for 4 districts : Av. 1200 TPD	

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Reserves to be See Table 5.9

liquidated:

By development **0.630 Mt**

By depillaring **0.872 Mt.**

**Total 1.502 Mt.**

Max. annual output: **0.36 Mt.**

Working life of stage-I: About 8 years including shaft sinking period of 3 years.

Yearwise schedule of production

Yr.	Coal production (Mt)		Yr.	Coal Production (Mt)	
	Yrly.	Cum.		Yrly.	Cum.
01	-	-	06	0.36	0.91
02	-	-	07	0.36	1.27
03	0.03	0.03	08	0.36	1.63
04	0.18	0.21			
05	0.34	0.55			Stage I completed Stage II started

## 10.2 Stage II (Year 08 to year 13)

### A. Area of activity

- North of dyke : Seams IV, VA in sector 21 and 25.  
Seams IIC & IIA in sectors 23 & 24.
- South of dyke : Seam IC and IIA in sectors 18 and 17.

### B. Details of seamwise reserves (Extracted from Table 5.4 – Ch. V.).

**Figs. in mil. tes.**

Seams	North of dyke			South of dyke			Total Extractable
	Geol.	Panel	Extractable	Geol.	Panel	Extractable	
IC	0.832	0.342	0.246	1.634	0.942	0.577	0.823
IIA	0.493	0.205	0.123	0.592	0.355	0.213	0.336
IIB							
III							
IVA	1.130	0.679	0.304	-	-	-	0.304
VA	2.108	1.328	0.473	-	-	-	0.473
VB	0.510	0.192	0.050	-	-	-	0.500
	<b>5.143</b>	<b>2.746</b>	<b>1.196</b>	<b>2.226</b>	<b>1.297</b>	<b>0.790</b>	<b>1.986</b>

- C. Shaft landing : on the floor of seam VB – North of Dyke at a depth of 225 from surface
- D. Entry : North of dyke : Seam IVA through drift from shaft bottom.
- South of dyke : Seam IC & IIA by drift through shaft bottom (120m long) cutting across dyke

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E. Mining technology :

Seam IC : Std. ht. LHD & belt conveyor  
(seam thickness > 2.8m)

Seam IIA (North of dyke), IVA, VA: Low ht. LHD & belt conveyor  
(2.1 to 2.8).

Seam VB and IIA (south of dyke) : Low ht. SDL/ chain conveyor.

F. Production schedule

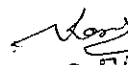
Year	Coal (Mt)		Remarks
	Yrly.	Cum.	
08	0.13	0.13	excess from stage I
09	0.36	0.49	
10	0.36	0.85	
11	0.36	1.21	
12	0.36	1.57	
13	0.36	1.93	
14	0.056*	1.986	* balance from stage III

**10.3 Stage III (Year 13 to year 30)**

This stage involves drivage of a pair of stone drifts each about 120m long from shafts 1 and 2 to intersect seam VA south of dyke and develop both upper and lower group of seams on the downthrow side of fault F22. Needless to point out, the area south of dyke in this stage of mine is having the highest mining potential – seamwise reserves of which are given in table 5.4 (Chapter V). The mining plan envisages the following extractable reserves from seam IC, IIA, IIB, III, IVA, VA and VB (Details in table 5.11 – Chapter V).

Available Geol Reserves : 24.078 Mtes.

Reserves within panel : 14.742 Mtes.

  
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Extractable reserves:

By development	: 2.903	} 8.855
By depillaring	: 5.952	

The mining plan proposes extraction of approx. 6.00 Mil. tes. from this stage over a period of 17 years (end of ML period of 30 years) @ 0.36 Mt/annum and the balance reserves beyond the end of ML period after renewal of mining lease. The extent of the area measures 2.2Km. along strike and 1.2 Kms. along the dip rise direction. The liquidation of the reserves distributed in upper and lower group of seams (divided into a no. of sectors by faults) through shafts 1 and 2 located to the north of dyke may pose problems of logistics as well as ventilation for which another shaft may need to be sunk at a later date. The actual location of this shaft No. 3 depends upon a number of factors which are not possible to visualize at present. As and when the decision is taken for sinking another shaft the Mining Plan will be revised and submitted for fresh approval.

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