

PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP

SLNO.	SCALE/GRADE	STRENGTH	WAGES	BENEFITS	TOTAL
III	COMMON				
1	10750-16750	12	5086908	1425456	6530364
2	13750-18700	2	946520	255270	1201790
3	16000-20800	2	1052812	274326	1327138
4	17500-22300	4	2257472	617632	2875104
5	18500-23900	1	604861	174168	781429
6	5691-8247	2	339584	131144	470728
7	5962-8644	1	177965	67501	245466
8	6219-9009	23	4266040	1603445	5869485
9	6724-10360	7	1493065	545335	2038400
10	7260-11184	2	460518	165808	626326
11	7824-12054	24	5956104	2116296	8072400
12	I	27	4488696	1727325	6216021
13	II	7	1189972	455553	1645525
14	III	16	2801904	1065408	3867312
15	IV	10	1787280	676510	2463790
16	V	11	2047826	768262	2816088
17	VI	2	412554	151530	564084
18	E	12	2127468	807624	2935092
19	D	16	3035008	1135264	4170272
20	C	18	3757050	1378098	5135148
21	B	12	2616324	951612	3567936
22	A	1	231479	83263	314742
SUB TOTAL		212	47137410	16576830	63734640
IV	LAND RECLAMATION :				
1	6219-9009	1	185480	69715	255195
2	I	1	166248	63975	230223
SUB TOTAL		2	351728	133690	485418

*INCLUDES 18000.00 - N.P.A FOR 1.00 MANPOWER

**INCLUDES 2400.00 - C.H.A. FOR 1.00 MANPOWER

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PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP

STATEMENT SHOWING SALARIES, WAGES & BENEFITS, MANPOWER ANALYSIS AND PRODUCTIVITY

APPENDIX-B.1

COAL in Mt : 1.25

OB in Mm³ : 8.45

GROUP NAME	STRENGTH	MANSHIFT	TOTAL WAGES & BENEFITS (Rs.)	E.M.S (Rs.)	O.M.S. (t)	WAGES & SALARIES COST/t (Rs.)
COAL	96	25344	27111538	1069.74	49.321	21.69
OVERBURDEN	23	6072	6229192	1025.89	1391.634	0.74
COMMON	212	55968	63734640	1138.77	22.334	50.99
LAND RECLAMATION	2	528	485418	919.35		0.39
OVERALL	333	87912	97560788	1109.76	14.219	78.05

* O.M.S. for OVERBURDEN is in m³* WAGES & SALARIES FOR OVERBURDEN is in RS/m³

E.M.S. = WAGE+BENEFITS/MANSHIFT O.M.S. = PROD.PER t./MANSHIFT

(REVISED OMS AS PER CIL - OM CIL-C-5B:MP/OWS/347/ DT. 07/04/1987)

TOTAL
3530364
1201790
1327138
2875104
781429
470728
245466
58694
2038400
626326
9072400
3216021
1645525
3867312
2463790
2816088
564084
2935092
4170272
5135148
3567936
314742
33734640
255195
230223
485418

PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP

STATEMENT SHOWING SALARIES, WAGES & BENEFITS, MANPOWER ANALYSIS AND PRODUCTIVITY
 APPENDIX-B.1
 COAL in Mt : 1.25
 OB in Mm³ : 8.45

MANPOWER ANALYSIS (Excluding Welfare Manpower)				
GROUP NAME	STRENGTH	MANSHIFT	TOTAL WAGES & BENEFITS (in Rs.)	O.M.S. (t)
COAL	96	25344	27111538	49.321
OVERBURDEN	23	6072	6229192	1391.634
COMMON	189	49896	63734640	25.052
LAND RECLAMATION	2	528	485418	
OVERALL	310	81840	97560788	15.274

O.M.S. for OVERBURDEN is in m³
 WAGES & SALARIES FOR OVERBURDEN is in Rs/m³

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APPENDIX - C.

PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP

Coal (Mty) : 1.25
Peak OB(Mm3) : 8.45
Revenue Life (Yrs.) : 21

ESTIMATED COST OF PRODUCTION PER TONNE OF COAL AT 100% CAPACITY UTILISATION

(MARCH, 2009)

Sl. No.	Particulars	14.22		
		1310.39		
	OMS (t) (including welfare manpower) EMS (Rs.)	Total Cost/t (Rs.)	Variable Cost/t (Rs.)	Fixed Cost/t (Rs.)
1	Wages & Salaries	97.25	0.00	97.25
2	Stores	135.20	71.08	64.12
3	Power	17.62	5.73	11.89
4	Env. Pollution Control Exp.	3.00	0.00	3.00
5	Misc. Expenses (including W.D.)	35.41	20.58	14.83
6	Social Security cost	1.00	1.00	0.00
7	Hiring of Equipment charges	427.29	427.29	0.00
5	Mine Closure Expd.	6.00	6.00	0.00
6	Administrative Charges	66.90	0.00	66.90
7	Depreciation	94.39	0.00	94.39
8	Interest on Working Capital @ 14.5%	38.17	25.70	12.47
9	Interest on loan capital @ 11.5%	23.00	0.00	23.00
	TOTAL	945.23	557.38	387.85

APPENDIX - C.1

PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP

Coal (Mty) : 1.25
 Peak OB(Mm3) : 8.45
 Life (Yrs.) : 21

COST & PROFITABILITY AT DIFFERENT LEVEL OF PRODUCTION**(MARCH,2009)****PARTIAL HIRING OPTION**

Sl.No.	Levels of Production	85%	100%
1	Production in (Mt)	1.0625	1.25
2	Variable Cost (Rs./t)	557.38	557.38
3	Fixed Cost (Rs./t)	456.29	387.85
4	Total Cost (Rs./t)	1013.67	945.23
5	Capital Investment on annual output (Rs./t)	1633.55	1388.52
6	Equity Capital (Rs./t)	866.65	736.65
7	Return on Equity '@ 12% (Rs./t)	104.00	88.4
8	Minimum Selling Price to yield above return (Rs./t)	1117.67	1033.63
9	Present Average Selling Price (Rs./t)	975.50	975.50
10	Profit/Loss (Rs./t)	-38.17	30.27
11	IRR (%)	-1.18	5.01
	<u>Other Cost Analysis :</u>		
12	Price to yield 0% IRR	988.10	923.48
13	Price to yield 12% IRR	1153.77	1064.29

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C.1

1.25

3.45

21

APPENDIX-C.4

PROJECT REPORT FOR SAKHRI- IRAWATI (PAUNI-III OC)(MARCH,2009)SENSITIVITY ANALYSIS OF FIRR AND FNPV ON DIFFERENT PARAMETERSPARTIAL HIRING OPTION

PARAMETERS	I.R.R. (%)					
	0%	5%	10%	15%	20%	25%
INCREASE IN CAPITAL (%)	5.01	4.43	3.89	3.37	2.88	2.41
INCREASE IN WAGES (%)	5.01	4.58	4.14	3.70	3.25	2.91
INCREASE IN STORES (%)	5.01	4.40	3.79	3.16	2.52	1.86
INCREASE IN OPERATING COST (%)	5.01	1.10	-3.49	-9.21	-16.48	-24.20
DECREASE IN CAPACITY UTILISATION (%)	5.01	3.11	1.07	-1.18	-3.68	-6.53
DECREASE IN SALES REALISATION (%)	5.01	0.34	-5.53	-13.69	-23.65	-32.07
INCREASE IN SALES REALISATION (%)	5.01	9.01	12.63	15.98	19.16	22.19
IMPACT OF DECREASE IN WORKING CAPITAL INTEREST RATE FROM (%) 14.50	0%	0.5%	1.0%	1.5%	2.0%	2.5%
	5.01	5.10	5.19	5.28	5.37	5.45

APPENDIX - F

PR FOR SAKHRI-IRAWATI (PAUNI-III) OC (MAR 2009)
ESTIMATED CAPITAL INVESTMENT ON THE BASIS OF COMPLETION COST
(MARCH,2009)

PARTICULARS	TOTAL	I YR 2009-10	II YR 2010-11	III YR 2011-12	IV YR 2012-13	V YR 2013-14	VI YR 2014-15	VII YR 2015-16	VIII YR 2016-17
LAND	747004	346057	400947	0	0	0	0	0	0
SERVICE BLDGS	125743	0	0	20116	41219	48263	16145	0	0
RES BLDGS	187577	0	0	26695	31257	36599	42854	50172	0
TOTAL BLDGS	313320	0	0	46811	72476	84862	58999	50172	0
PLANT & MACH	637016	0	0	321621	166707	127293	21395	0	0
FUR/FITT	4527	0	0	744	1743	2040	0	0	0
RAILWAY SIDING	0	0	0	0	0	0	0	0	0
VEHICLES	4108	0	0	2676	1432	0	0	0	0
PROSP/BOR	3379	0	0	1488	871	1020	0	0	0
CAP O/L INMINES	410140	25509	149570	24920	55223	154918	0	0	0
ROADS & CULVERTS	41015	0	966	13781	14548	7047	2155	2518	0
WATER SUP & S/D	66972	0	0	10714	21954	25706	8598	0	0
PR PREP COST	28773	0	0	14882	13891	0	0	0	0
ENV POLL CONTROL	20300	0	0	2902	3398	5101	3106	2518	3275
TOTAL DEVELOP	567200	25509	150536	67199	109014	192772	13859	5036	3275
TOTAL UPTO A08	2276554	371566	551483	440539	352243	407987	94253	55208	3275
NET REV EXP CAP	52273	10682	41591	0					
	5328827	382248	593074	440539	352243	407987	94253	55208	3275

Sl. No.	1.	2.	3.	4.	5.	6.	T

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APPENDIX-G

PROJECT REPORT FOR SAKHARI-IRAWATI (PAUNI -III) OCP

**STATEMENT SHOWING ESTIMATED CAPITAL INVESTMENT
FOR ENVIRONMENT POLLUTION CONTROL
(March, 2009)**

Sl. No.	Particulars	Total Capital	(Rs. in '000)		
			PHASING		
			III	IV	V
1.	Sedimentation pond for treatment of mine waste water	1500	500	500	500
2.	Effluent treatment plant for treatment of workshop effluent	1000	300	400	300
3.	Base line environmental data generation and scientific studies related to environment	500	250	150	100
4.	Installation of fixed type sprinklers for Dust Control	800		400	400
5.	Plantation during First Three year	1500	500	500	500
6.	Digital Mapping for land use plan	800	400		400
	TOTAL	6100	1950	1950	2200

PROJECT REPORT
FOR
SAKHARI-IRAWATI (PAUNI-III) OC MINE

LIST OF ANNEXURES

SL. NO.	PARTICULARS	ANNEXURE NO.
1	DETAILS OF BOREHOLES DRILLED BY CMPDI IN WEST OF PAUNI EXTN. BLOCK	I
2	STATEMENT SHOWING THICKNESS OF DIFFERENT FORMATIONS	II
3	DETAILS OF PHYSICO-MECHANICAL TESTS	III
4	STATEMENT SHOWING PROXIMATE ANALYSIS	IV
5	UPDATED RATES FOR HIRING OF HEMM, AS ON MARCH, 2009	V
6	MINUTES OF PLANNING COMMITTEE MEETING HELD AT WCL (Hq), NAGPUR	VI
7	OBSERVATIONS OF OPENCAST DEPARTMENT, CMPDI (Hq), RANCHI	VII
8	OBSERVATIONS OF PROJECT APPRAISAL DEPARTMENT, CMPDI (Hq), RANCHI	VIII

STATEMENT
DEPTH OF
WARDHA VA

SR. BOREHOLE
NO. NAME

1 CMWG96

2 CMWG101

3 CMWG102

4 CMWG105

5 CMWG106

6 CMWG107

7 CMWG117

8 CMWG119

9 CMWG120

10 CMWG122

11 CMWG123

12 CMWG124

13 CMWG125

14 CMWG126

15 CMWG127

16 CMWG128

17 CMWG129

18 CMWG137

19 CMWG138

20 CMWG139

Job No. 4021291

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ANNEXURE-I

STATEMENT SHOWING REDUCED LEVELS, CO-ORDINATES, PERIOD OF DRILLING AND CLOSING DEPTH OF BOREHOLES DRILLED BY CMPDI, AREA WEST OF PAUNI EXTN. BLOCK, (PAUNI-III), WARDHA VALLEY COALFIELD, DIST.- CHANDRAPUR (M.S.).

-1-

SR. BOREHOLE NO. NAME	DEPARTURE (m)	LATITUDE (m)	REDUCED LEVEL (m)	CLOSING DEPTH (m)	DATE OF COMMENCEMENT	DATE OF COMPLETION

1 CMWG96	3026784.853	1061369.937	184.64	166.00	17-03-2000	29-03-2000
2 CMWG101	3026517.541	1061098.360	185.81	146.00	10-04-2000	20-04-2000
3 CMWG102	3026731.598	1061807.846	184.80	206.00	14-04-2000	02-05-2000
4 CMWG105	3026436.125	1061550.079	185.11	159.00	28-03-2001	07-04-2001
5 CMWG106	3026057.609	1062153.755	187.39	212.00	29-03-2001	11-04-2001
6 CMWG107	3026046.751	1061651.309	191.63	146.00	10-04-2001	18-04-2001
7 CMWG117	3025244.033	1062141.238	194.66	116.00	21-05-2001	25-05-2001
8 CMWG119	3025572.943	1062401.555	191.86	102.00	26-05-2001	31-05-2001
9 CMWG120	3024981.446	1062525.058	195.90	110.00	01-06-2001	09-06-2001
10 CMWG122	3025670.702	1062124.586	190.63	163.90	04-05-2003	16-05-2003
11 CMWG123	3026345.859	1061909.597	186.22	192.00	06-05-2003	17-05-2003
12 CMWG124	3025375.331	1062603.551	191.55	83.00	17-05-2003	20-05-2003
13 CMWG125	3025742.653	1061915.443	188.56	125.00	18-05-2003	24-05-2003
14 CMWG126	3024918.880	1062207.989	196.81	80.00	21-05-2003	24-05-2003
15 CMWG127	3024673.389	1062414.791	199.69	72.00	27-05-2003	30-05-2003
16 CMWG128	3025663.582	1061747.495	188.99	85.00	27-05-2003	30-05-2003
17 CMWG129	3025018.489	1061993.893	193.77	52.00	30-05-2003	03-06-2003
18 CMWG137	3025419.112	1062006.886	191.16	118.00	01-03-2004	05-03-2004
19 CMWG138	3026065.008	1061828.158	188.11	184.00	08-02-2004	13-03-2004
20 CMWG139	3025277.510	1061685.823	189.49	106.80	11-03-2004	14-03-2004

- 2 -

ANNEXURE-I (contd.)

SR. BOREHOLE NO. NAME	DEPARTURE (m)	LATITUDE (m)	REDUCED LEVEL (m)	CLOSING DEPTH (m)	DATE OF COMMENCE- MENT	DATE OF COMPLE- TION	SR. BOREHO NO. NAME
21 CMWG140	3026283.082	1061252.202	187.27	71.00	14-03-2004	18-03-2004	41 CMWG17
22 CMWG141	3025917.968	1061426.030	187.26	46.80	17-03-2004	18-03-2004	42 CMWG17
23 CMWG142	3027170.770	1061114.793	187.35	187.00	19-03-2004	31-03-2004	43 CMWG17
24 CMWG144	3026919.749	1061549.622	183.25	184.80	24-03-2004	01-04-2004	44 CMWG17
25 CMWG151	3026634.492	1061212.274	184.04	133.80	13-05-2004	21-05-2004	45 CMWG17
26 CMWG152	3025338.838	1062422.675	191.42	164.80	25-05-2004	02-06-2004	46 CMWG17
27 CMWG153	3026072.048	1061504.679	187.10	61.00	26-05-2004	28-05-2004	47 C 17
28 CMWG154	3025716.250	1061609.297	189.29	58.00	29-05-2004	30-05-2004	48 CMWG18
29 CMWG155	3025367.423	1061810.474	189.24	70.00	31-05-2004	02-06-2004	49 CMWG18
30 CMWG161	3025902.827	1061996.848	186.69	173.00	02-02-2005	10-02-2005	50 CMWG18
31 CMWG162	3025921.765	1061736.257	188.52	100.00	11-02-2005	16-02-2005	51 CMWG18
32 CMWG163	3026114.469	1061421.820	186.09	50.00	18-02-2005	19-02-2005	52 CMWG18
33 CMWG164	3026376.955	1061397.006	186.47	143.00	19-02-2005	21-02-2005	53 CMWG18
34 CMWG165	3026141.995	1061163.099	187.15	45.00	26-02-2005	28-02-2005	54 CMWG18
35 CMWG166	3026554.707	1061675.978	183.52	179.00	01-03-2005	09-03-2005	55 CMWG18
36 CMWG167	3024563.719	1062801.276	199.23	70.00	04-03-2005	08-03-2005	56 CMWG20
37 CMWG168	3027083.911	1061265.720	185.84	172.00	08-03-2005	17-03-2005	57 CMWG20
38 CMWG169	3024868.178	1062485.435	136.46	92.00	10-03-2005	15-03-2005	58 C 20
39 CMWG170	3026040.531	1062079.105	185.74	218.00	11-03-2005	19-03-2005	59 CMWG21
40 CMWG171	3024390.527	1062650.528	198.65	59.00	16-03-2005	19-03-2005	60 CMWG21
							61 CMWG21

NOTE :- *

165

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- 3 -

-I (contd.)

ANNEXURE-I (contd.)

*****	SR. BOREHOLE	DEPARTURE	LATITUDE	REDUCED	CLOSING	DATE OF	DATE OF
*****	NO. NAME	(m)	(m)	LEVEL	DEPTH	COMMENCE-	COMPLE-
*****	DATE OF			(m)	(m)	MENT	TION
*****	COMPLE-						
*****	TION						
18-03-2004	41 CMWG173	3024408.357	1063041.888	194.22	44.00	22-03-2005	24-03-2005
18-03-2004	42 CMWG174	3025493.036	1062030.889	190.16	125.00	22-03-2005	29-03-2005
31-03-2004	43 CMWG175	3025127.907	1062570.941	193.07	139.00	25-03-2005	31-03-2005
01-04-2004	44 CMWG176	3025143.182	1061896.567	190.75	45.00	29-03-2005	30-03-2005
21-05-2004	45 CMWG177	3026913.785	1061090.802	187.84	152.00	30-03-2005	09-04-2005
02-06-2004	46 CMWG178	3025654.367	1061516.333	189.75	44.00	30- 3-2005	02-04-2005
28-05-2004	47 CMWG179	3024789.348	1062113.675	196.28	53.00	04-04-2005	15-04-2005
30-05-2004	48 CMWG180	3025491.673	1061654.887	188.25	56.00	05-04-2005	08-04-2005
02-06-2004	49 CMWG181	3025864.278	1062288.776	187.84	86.00	11-04-2005	15-04-2005
10-02-2005	50 CMWG183	3025129.563	1062327.375	193.89	119.00	15-04-2005	21-04-2005
16-02-2005	51 CMWG184	3024850.458	1062758.386	197.93	107.00	19-04-2005	28-04-2005
19-02-2005	52 CMWG185	3024500.954	1062392.291	199.40	56.00	22-04-2005	26-04-2005
21-02-2005	53 CMWG187	3024215.126	1062854.543	193.62	44.00	28-04-2005	29-04-2005
28-02-2005	54 CMWG188	3024429.311	1062937.702	196.73	60.00	30-04-2005	05-05-2005
09-03-2005	55 CMWG189	3025983.767	1061269.307	187.11	40.00	30-04-2005	04-05-2005
08-03-2005	56 CMWG207*	3026786.672	1061921.496	184.83	215.00	19-04-2006	06-05-2006
17-03-2005	57 CMWG208	3024580.656	1062584.532	200.29	73.00	08-05-2006	13-05-2006
15-03-2005	58 CMWG209*	3026364.626	1062208.333	186.66	95.00	10-05-2006	17-05-2006
19-03-2005	59 CMWG210	3024091.502	1061909.085	197.07	80.00	15-05-2006	19-05-2006
19-03-2005	60 CMWG211*	3026601.380	1062102.368	186.83	65.00	18-05-2006	26-05-2006
*****	61 CMWG212*	3023693.355	1062918.664	196.55	32.00	22-05-2006	23- 5-2006

NOTE :- * - Indicates boreholes drilled outside the block.

Sh No 4021204

**STATEMENT SHOWING THICKNESS OF DIFFERENT FORMATIONS ENCOUNTERED IN THE BOREHOLES DRILLED BY CMPDI,
AREA WEST OF PAUNI EXTN.BLOCK, WARDHA VALLEY COALFIELD, DIST - CHANDRAPUR (M.S.).**

STATEMEN

Sl No.	BH No.	Reduced level (m)	SOIL			KAMTHI			MOJUR			BARAKAR			TALCHIR			Closing depth (m)	BH No.	R
			From (m)	To (m)	Thick (m)	From (m)	To (m)	Thick (m)	From (m)	To (m)	Thick (m)	From (m)	To (m)	Thick (m)	From (m)	To (m)	Thick (m)			
31	CMWG - 162	188.52	0.00	6.25	6.25	6.25	38.77	32.52	-	-	-	38.77	100.00	61.23	-	-	-	100.00	CMWG - 162	
32	CMWG - 163	186.09	0.00	7.00	7.00	7.00	30.77	23.77	-	-	-	30.77	50.00	19.23	-	-	-	50.00	CMWG - 163	
33	CMWG - 164	186.47	0.00	6.55	6.55	6.55	37.40	30.85	-	-	-	37.40	143.00	105.60 (F)	-	-	-	143.00	CMWG - 164	
34	CMWG - 165	187.15	0.00	6.75	6.75	6.75	27.69	20.94	-	-	-	27.69	45.00	17.31 (F)	-	-	-	45.00	CMWG - 165	1
35	CMWG - 166	183.52	0.00	6.40	6.40	6.40	44.25	37.85	-	-	-	44.25	179.00	134.75	-	-	-	179.00	CMWG - 166	1
36	CMWG - 167	189.23	0.00	6.15	6.15	6.15	29.00	22.85	-	-	-	29.00	70.00	41.00	-	-	-	70.00	CMWG - 167	1
37	CMWG - 168	185.84	0.00	7.00	7.00	7.00	41.66	34.66	-	-	-	41.66	172.00	130.34	-	-	-	172.00	CMWG - 168	1
38	CMWG - 169	196.46	0.00	6.70	6.70	6.70	38.00	31.30	-	-	-	38.00	92.00	54.00	-	-	-	92.00	CMWG - 169	1
39	CMWG - 170	185.74	0.00	7.10	7.10	7.10	41.00	33.90	-	-	-	41.00	218.00	177.00 (F)	-	-	-	218.00	CMWG - 170	1
40	CMWG - 171	198.65	0.00	6.50	6.50	6.50	35.34	28.84	-	-	-	35.34	59.00	23.66	-	-	-	59.00	CMWG - 171	1
41	CMWG - 173	194.22	0.00	5.00	5.00	5.00	29.00	24.00	-	-	-	-	-	-	29.00 (F)	39.46	10.46 (F)	44.00	CMWG - 173	1
															39.40 (F)	44.00 Vindhyan	4.60 (F)			
42	CMWG - 174	190.16	0.00	6.25	6.25	6.25	39.39	33.14	-	-	-	39.39	125.00	85.61	-	-	-	125.00	CMWG - 174	15
43	CMWG - 175	193.07	0.00	5.00	5.00	5.00	15.40	10.40	-	-	-	15.40	139.00	123.60	-	-	-	139.00	CMWG - 175	15
44	CMWG - 176	190.75	0.00	6.10	6.10	6.10	23.00	16.90	-	-	-	23.00	45.00	22.00	-	-	-	45.00	CMWG - 176	15
45	CMWG - 177	187.84	0.00	6.50	6.50	6.50	41.94	35.44	-	-	-	41.94	152.00	110.06	-	-	-	152.00	CMWG - 177	15
46	CMWG - 178	189.75	0.00	6.10	6.10	6.10	23.00	16.90	-	-	-	23.00	44.00	21.00	-	-	-	44.00	CMWG - 178	15
47	CMWG - 179	196.28	0.00	6.25	6.25	6.25	30.32	24.07	-	-	-	30.32	53.00	22.68	-	-	-	53.00	CMWG - 179	15
48	CMWG - 180	188.25	0.00	6.25	6.25	6.25	34.76	28.51	-	-	-	34.76	56.00	21.24	-	-	-	56.00	CMWG - 180	15
49	CMWG - 181	187.84	0.00	6.15	6.15	6.15	39.56	33.41	-	-	-	39.56	81.90	42.34 (F)	81.90 (F)	86.00	4.10 (F)	86.00	CMWG - 181	15
50	CMWG - 183	193.89	0.00	5.80	5.80	5.80	41.42	35.62	-	-	-	41.42	119.00	77.58	-	-	-	119.00	CMWG - 183	15
51	CMWG - 184	197.93	0.00	5.00	5.00	5.00	39.65	34.65	-	-	-	39.65	107.00	67.35	-	-	-	107.00	CMWG - 184	15
52	CMWG - 185	199.40	0.00	5.55	5.55	5.55	31.32	25.77	-	-	-	31.32	56.00	24.68	-	-	-	56.00	CMWG - 185	19
53	CMWG - 187	193.62	0.00	6.00	6.00	6.00	26.00	20.00	-	-	-	26.00	44.00	18.00	-	-	-	44.00	CMWG - 187	19
54	CMWG - 188	196.73	0.00	5.20	5.20	5.20	38.00	32.80	-	-	-	38.00	60.00	22.00	-	-	-	60.00	CMWG - 188	19
55	CMWG - 189	187.11	0.00	6.15	6.15	6.15	17.95	11.80	-	-	-	17.95	40.00	22.05	-	-	-	40.00	CMWG - 189	18
56	CMWG - 207*	184.83	0.00	6.80	6.80	6.80	28.13	21.33	-	-	-	28.13	215.00	186.87 (F)	-	-	-	215.00	CMWG - 207*	18
57	CMWG - 208	200.29	0.00	5.80	5.80	5.80	36.77	30.97	-	-	-	36.77	73.00	36.23	-	-	-	73.00	CMWG - 208	20
58	CMWG - 209*	186.66	0.00	6.00	6.00	6.00	24.00	18.00	-	-	-	24.00	95.00	71.00	-	-	-	95.00	CMWG - 209*	18
59	CMWG - 210	197.07	0.00	4.00	4.00	4.00	38.88	34.88	-	-	-	38.88	76.18	37.30	76.18	80.00	3.82	80.00	CMWG - 210	19
60	CMWG - 211*	186.83	0.00	6.20	6.20	6.20	27.00	20.80	-	-	-	27.00	65.00	38.00 (F)	-	-	-	65.00	CMWG - 211*	18
61	CMWG - 212*	196.55	0.00	4.40	4.40	4.40	15.98	11.58	-	-	-	15.98	32.00	16.02	-	-	-	32.00	CMWG - 212*	19

NOTE F - Indicates faulted thickness
* Indicates boreholes drilled outside the block area.

166

CMPDI

ANNEXURE - I

(BY CMPDI)

CMPDI

ANNEXURE - II

STATEMENT SHOWING THICKNESS OF DIFFERENT FORMATIONS ENCOUNTERED IN THE BOREHOLES DRILLED BY CMPDI,
AREA WEST OF PAUNI EXTN. BLOCK, WARDHA VALLEY COALFIELD, DIST - CHANDRAPUR (M.S.).

CHIR	Thick. (m)	Closing depth (m)	BH. No	Reduced level (m)	SOIL			KAMTHI			MOTUR			BARAKAR			TALCHIR			Closing depth (m)
					From (m)	To (m)	Thick. (m)	From (m)	To (m)	Thick. (m)	From (m)	To (m)	Thick. (m)	From (m)	To (m)	Thick. (m)	From (m)	To (m)	Thick. (m)	
-	-	100.00	CMWG - 162	188.52	0.00	6.25	6.25	6.25	38.77	32.52	-	-	-	38.77	100.00	61.23	-	-	-	100.00
-	-	50.00	CMWG - 163	186.09	0.00	7.00	7.00	7.00	30.77	23.77	-	-	-	30.77	50.00	19.23	-	-	-	50.00
-	-	143.00	CMWG - 164	186.47	0.00	6.55	6.55	6.55	37.40	30.85	-	-	-	37.40	143.00	105.60 (F)	-	-	-	143.00
-	-	45.00	CMWG - 165	187.15	0.00	6.75	6.75	6.75	27.69	20.94	-	-	-	27.69	45.00	17.31 (F)	-	-	-	45.00
-	-	179.00	CMWG - 166	183.52	0.00	6.40	6.40	6.40	44.25	37.85	-	-	-	44.25	179.00	134.75	-	-	-	179.00
-	-	70.00	CMWG - 167	199.23	0.00	6.15	6.15	6.15	29.00	22.85	-	-	-	29.00	70.00	41.00	-	-	-	70.00
-	-	172.00	CMWG - 168	185.84	0.00	7.00	7.00	7.00	41.66	34.66	-	-	-	41.66	172.00	130.34	-	-	-	172.00
-	-	92.00	CMWG - 169	196.46	0.00	6.70	6.70	6.70	38.00	31.30	-	-	-	38.00	92.00	54.00	-	-	-	92.00
-	-	218.00	CMWG - 170	185.74	0.00	7.10	7.10	7.10	41.00	33.90	-	-	-	41.00	218.00	177.00 (F)	-	-	-	218.00
39.46	10.46 (F)	44.00	CMWG - 171	198.65	0.00	6.50	6.50	6.50	35.34	28.84	-	-	-	35.34	59.00	23.66	29.00 (F)	39.46	10.46 (F)	44.00
44.00	4.60 (F)	44.00	CMWG - 173	194.22	0.00	5.00	5.00	5.00	29.00	24.00	-	-	-	-	-	-	39.40 (F)	44.00	4.60 (F)	44.00
-	-	125.00	CMWG - 174	190.16	0.00	6.25	6.25	6.25	39.39	33.14	-	-	-	39.39	125.00	85.61	-	-	-	125.00
-	-	139.00	CMWG - 175	193.07	0.00	5.00	5.00	5.00	15.40	10.40	-	-	-	15.40	139.00	123.60	-	-	-	139.00
-	-	45.00	CMWG - 176	190.75	0.00	6.10	6.10	6.10	23.00	16.90	-	-	-	23.00	45.00	22.00	-	-	-	45.00
-	-	152.00	CMWG - 177	187.84	0.00	6.50	6.50	6.50	41.94	35.44	-	-	-	41.94	152.00	110.06	-	-	-	152.00
-	-	44.00	CMWG - 178	189.75	0.00	6.10	6.10	6.10	23.00	16.90	-	-	-	23.00	44.00	21.00	-	-	-	44.00
-	-	53.00	CMWG - 179	196.28	0.00	6.25	6.25	6.25	30.32	24.07	-	-	-	30.32	53.00	22.68	-	-	-	53.00
85	4.10 (F)	56.00	CMWG - 180	188.25	0.00	6.25	6.25	6.25	34.76	28.51	-	-	-	34.76	56.00	21.24	-	-	-	56.00
-	-	86.00	CMWG - 181	187.84	0.00	6.15	6.15	6.15	39.56	33.41	-	-	-	39.56	81.90	42.34 (F)	81.90 (F)	86.00	4.10 (F)	86.00
-	-	119.00	CMWG - 183	193.89	0.00	5.80	5.80	5.80	41.42	35.62	-	-	-	41.42	119.00	77.58	-	-	-	119.00
-	-	107.00	CMWG - 184	197.93	0.00	5.00	5.00	5.00	39.65	34.65	-	-	-	39.65	107.00	67.35	-	-	-	107.00
-	-	56.00	CMWG - 185	199.40	0.00	5.55	5.55	5.55	31.32	25.77	-	-	-	31.32	56.00	24.68	-	-	-	56.00
-	-	44.00	CMWG - 187	193.62	0.00	6.00	6.00	6.00	26.00	20.00	-	-	-	26.00	44.00	18.00	-	-	-	44.00
-	-	60.00	CMWG - 188	196.73	0.00	5.20	5.20	5.20	38.00	32.80	-	-	-	38.00	60.00	22.00	-	-	-	60.00
-	-	40.00	CMWG - 189	187.11	0.00	6.15	6.15	6.15	17.95	11.80	-	-	-	17.95	40.00	22.05	-	-	-	40.00
-	-	215.00	CMWG - 207*	184.83	0.00	6.80	6.80	6.80	28.13	21.33	-	-	-	28.13	215.00	186.87 (F)	-	-	-	215.00
-	-	73.00	CMWG - 208	200.29	0.00	5.80	5.80	5.80	36.77	30.97	-	-	-	36.77	73.00	36.23	-	-	-	73.00
80.00	3.82	95.00	CMWG - 209*	186.66	0.00	6.00	6.00	6.00	24.00	18.00	-	-	-	24.00	95.00	71.00	-	-	-	95.00
-	-	80.00	CMWG - 210	197.07	0.00	4.00	4.00	4.00	38.88	34.88	-	-	-	38.88	76.18	37.30	76.18	80.00	3.82	80.00
-	-	65.00	CMWG - 211*	186.83	0.00	6.20	6.20	6.20	27.00	20.80	-	-	-	27.00	65.00	38.00 (F)	-	-	-	65.00
-	-	32.00	CMWG - 212*	196.55	0.00	4.40	4.40	4.40	15.98	11.58	-	-	-	15.98	32.00	16.02	-	-	-	32.00

NOTE : F - Indicates faulted thickness
 * Indicates boreholes drilled outside the block area.

STATEMENT SHOWING DETAILS OF PHYSICO-MECHANICAL TESTS CARRIED OUT ON BOREHOLE CORES (CMWG - 208),
AREA WEST OF PAUNI EXTN. BLOCK, WARDHA VALLEY COALFIELD.

AREA WEST OF PAUNI EXTN. BLOCK, WARDAR VALLEY, GOA DIST. INDIA

Sample No.	Rock Type	Depth (m)		Density (gm/cc)	Compressive strength (Mpa)	Compressive strength (Wet) (Mpa)	Tensile strength (MPa)	Shear strength (MPa)	Point load index (Mpa)	Cone Indenter Index (Mpa)	Slake durability index (%)	PSI	Angle of internal friction degree (Ø)	Cohesion "C" (Mpa)	Protod-yakovlev index
		From	To												
1	Grey mgd. sst	41.00	43.59	--	3.74	SNA	0.69	SNA	--	--	--	--	--	--	--
2	Grey Cgd & mgd. sst	43.59	44.42	--	2.08	SNA	0.85	SNA	--	--	--	--	--	--	--
3	Grey mgd. sst	44.42	47.70	--	7.89	1.50	1.19	SNA	--	--	--	--	--	--	--
4	Carb. clay	47.70	48.91	--	SNA	SNA	SNA	SNA	--	--	--	--	--	--	--
5	Coal & sh. Coal	48.91	56.00	--	19.12	15.76	4.32	1.37	COMPOSITE TOP SECTION (48.91 - 57.25)						
6	Coal	56.00	57.25	--	29.63	SNA	4.63	SNA							
7	Grey Sandy sh.	57.25	58.37	--	18.72	8.95	3.23	SNA	--	--	--	--	--	--	--
8	Carb sh/Sh. Coal	58.37	59.00	--	SNA	SNA	SNA	SNA	--	--	--	--	--	--	--
9	Grey Sandy sh	59.00	59.67	--	20.63	12.05	2.74	SNA	--	--	--	--	--	--	--
10	Grey Fgd. sst.	59.67	61.76	--	5.41	5.28	1.59	1.31	--	--	--	--	--	--	--
11	Coal/C sh/Sh.	61.76	65.75	--	SNA	SNA	SNA	SNA	COMPOSITE BOT. SECTION (61.76-63.70)						
12	Coal	65.75	67.30	--	SNA	SNA	SNA	SNA							
13	Grey Sandy sh.	67.30	67.76	--	21.39	SNA	2.84	SNA	--	--	--	--	--	--	--
14.	Grey Fgd sst.	67.76	68.00	--	19.42	SNA	3.54	SNA	--	--	--	--	--	--	--
15	Grey Fgd. sst.	68.00	71.00	--	18.32	8.22	2.36	1.39	--	--	--	--	41	4.00	--

NOTE : SNA - Suitable specimen Not available

FGD SST - Fine grained sandstone

MGD SST - Medium grained sandstone

CGD SST - Coarse grained sandstone

STATEMENT S
COMPOSITE B
WARDHA VALL
BH. NOA. COMPOSITE
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STATEMENT SHOWING PROXIMATE ANALYSIS ON 60% RH & 400 C (DETERMINED AND CALCULATED BASIS) FOR COMPOSITE TOP, COMPOSITE BOTTOM AND COMPOSITE TOP+BOTTOM SECTIONS, AREA WEST OF PAUNI EXTN. BLOCK, ANNEXURE -IV
WARDHA VALLEY COALFIELD, DIST- CHANDRAPUR (M.S.)

BN. NO	From	To	Thickness I - 100	M %	A %	UHV	GR	IP M %	A %	UHV	GR
A. COMPOSITE TOP SECTION											
CMWG	96	146	153.66	7.66	7.6	27.3	4084 E				
CMWG	101	109.82	111.05	1.23	7.8	27.9	3973 E		7.6	27.3	4084 E
		(F)	(F)						7.8	27.9	3973 E
CMWG	102	184.27	194	9.73	7	32.9	3394 E		7	32.9	3394 E
CMWG	105	137.29	148.3	9.01	7.6	27.3	4084 E		7.6	27.3	4084 E
CMWG	107	131.91	133.01	1.1	8	26.6	4125 E		8	26.6	4125 E
	(F)		(F)								
CMWG	117	92.43	102.7	10.27	7.9	29.8	3697 E		7.9	29.8	3697 E
CMWG	120	86	96.4	10.4	8.3	29	3752 E		8.3	29	3752 E
CMWG	122	140.15	150.44	10.29	7.7	25.9	4263 D		7.7	25.9	4263 D
CMWG	123	169.17	178.87	9.7	7.6	28.2	3960 E		7.6	28.2	3960 E
CMWG	125	102.71	112.85	10.14	7.9	27.7	3987 E		7.9	27.7	3987 E
CMWG	126	55.72	67.46	11.74	7.2	29.3	3863 E		7.5	30.4	3670 E
CMWG	127	45.28	56	10.72	7.6	30	3711 E		7.6	30	3711 E
CMWG	128	62.28	72.07	9.79	8.4	25.9	4167 E		8.4	25.9	4167 E
CMWG	129	29.89	36.87	6.98	8.9	19.3	5008 C		8.9	19.3	5008 C
			(S/C)								
CMWG	137	91.1	102.52	11.42	6.8	33	3408 E		6.8	33	3408 E
CMWG	138	161.58	171.85	10.29	8.1	25.5	4263 D		8.1	25.5	4263 D
CMWG	140	49	59.52	10.52	7.9	31.8	3421 E		7.9	31.8	3421 E
CMWG	141	24.7	29.72	5.02	9.2	16.6	5340 C		9.2	16.6	5340 C
			(SC)								
CMWG	142	151.18	152.71	1.53	8.8	20	4926 D		8.8	20	4926 D
	(F)		(F)								
CMWG	144	165.92	175.74	9.82	8.5	24.4	4360 D		7.6	29.6	3766 E
CMWG	151	164.87	175.74	10.87	7.6	27.2	4098 E		7.3	32.7	3380 E
		115.99	121.55	5.56	8.3	24.2	4415 D		8.3	24.2	4415 D
		114.51	121.55	7.04	7.7	28.3	3932 E		7.7	28.3	3932 E
CMWG	152	140.54	151.53	10.99	8.3	28.5	3821 E		8.3	28.5	3821 E
CMWG	153	35.02	47.55	12.53	9	23.2	4456 D		9	23.2	4456 D
CMWG	154	42.68	52.46	9.78	6.5	32	3573 E		6.5	32	3573 E
CMWG	155	47.65	59.49	11.84	7.2	33	3352 F		5.7	40	2593 F
CMWG	161	149.18	158.35	9.17	8.5	25.2	4249 D		8.5	25.2	4249 D
CMWG	162	79.77	90.34	10.57	8.8	26.1	4084 E		8.8	26.1	4084 E
CMWG	163	32	32.96	0.96	8.6	21.8	4705 D		8.6	21.8	4705 D
			(S/C)								
CMWG	164	124.62	127.6	2.98	7.8	28.2	3932 E		7.8	28.2	3932 E
	(F)		(F)								
CMWG	165	28.55	38.82	10.27	7.9	27.2	4056 E		7.7	28.6	3891 E
			(S/C)								
CMWG	166	151	170	9	7.5	36.9	2773 F		7.5	36.9	2773 F
CMWG	167	48.1	56.42	8.32	8.2	20.2	4981 C		8.2	20.2	4981 C
CMWG	168	151.82	160.7	8.88	7.8	28.3	3918 E		7.8	28.3	3918 E
CMWG	169	68.14	77.36	9.22	8	26.7	4111 E		7.8	28.1	3996 E
		67.55	77.36	9.81	7.9	27.5	4015 E		7.3	32	3477 E
CMWG	170	196.17	207.84	11.67	7.7	29	3835 E		7.5	32.8	3339 F
CMWG	171	37.4	44.48	7.08	7.6	29.8	3739 E		7.6	29.8	3739 E
			(SC)								
CMWG	174	103.14	117.13	13.99	7.4	31.4	3546 E		7.2	33.2	3325 F
CMWG	175	117.25	127.11	9.86	7.4	28.5	3946 E		7.4	28.5	3946 E
CMWG	176	24.87	28.44	3.57	7.9	27.1	4070 E		7.9	27.1	4070 E
			(SC)								
CMWG	177	131.26	140	8.74	7.9	27	4084 E		7.9	27	4084 E
CMWG	178	26.92	31.3	4.38	8.7	20.4	4884 D		8.7	20.4	4884 D
			(SC)								
CMWG	179	31.66	39.1	7.44	8.7	20.5	4870 D		8.7	20.5	4870 D
			(SC)								
CMWG	180	35.99	41.69	5.7	6.9	35.4	3063 F		6.9	35.4	3063 F
			(SC)								
CMWG	184	83	91.4	8.4	7.5	27.3	4098 E		7.5	27.3	4098 E
CMWG	185	36.6	40.28	3.68	11.3	17.6	4912 D		8.7	20.6	4857 D
			(SC)								
CMWG	187	28.65	30.5	1.85	8.8	20.3	4884 D		8.8	20.3	4884 D
			(SC)								
CMWG	188	38.71	45.44	6.73	9.3	16.2	5381 C		9.3	16.2	5381 C
			(SC)								
CMWG	189	23.06	23.46	0.4	10	10.4	6085 B		10	10.4	6085 B

NOTE : SNA : Suitable/ cimen Not available
FGD SST : Fine grained sandstone
MGD SST : Medium grained sandstone
CGD SST : Coarse grained sandstone

B. COMPOSITE BOTTOM SECTION

(SC)

ANNEXURE -IV (Contd.)

CMWG	96	157.16	160.77	3.61	9.5	24.2	4249 D	9.5	24.2	4249 D
CMWG	102	198.1	202.38	4.28	7.3	25.5	4373 D	7.3	25.5	4373 D
CMWG	105	149.64	153.5	3.86	7.4	23.6	4622 D	7.4	23.6	4622 D
CMWG	107	136.88	140.75	3.87	8	25.2	4318 D	8	25.2	4318 D
CMWG	117	106.19	110.8	4.61	7.8	27.2	4070 E	7.8	27.2	4070 E
CMWG	119	85.65	89.9	4.25	8.5	18	5243 C	8.5	18	5243 C
CMWG	120	100.9	104.52	3.62	7.5	29.1	3849 E	7.5	29.1	3849 E
CMWG	122	154.5	158.75	4.25	7.8	23.7	4553 D	7.8	23.7	4553 D
CMWG	123	183.36	187.76	4.4	7.8	22.4	4732 D	7.8	22.4	4732 D
CMWG	125	116.14	120.04	3.9	8.1	25.7	4236 D	8.1	25.7	4236 D
CMWG	126	69.2	74.29	5.09	7.3	25.9	4318 D	7.3	25.9	4318 D
CMWG	127	60.37	65	4.63	8.1	21.4	4829 B	8.1	21.4	4829 D
CMWG	128	60.37	67.6	7.23**	7.3	25.5	4674 D	7.3	25.5	4674 D
CMWG	129	75.83	79.67	3.84	6.9	34.7	3159 F	6.9	34.7	3159 F
CMWG	129	40.46	45.2	4.74	8.3	19.4	5077 C	8.3	19.4	5077 A
CMWG	137	40.46	47.7	7.24**	8.7	22.3	4622 D	8.7	22.3	4622 D
CMWG	138	106	110.46	4.46	6.9	26.6	4277 D	6.9	26.6	4277 D
CMWG	140	174	177.02	3.02	6.9	31.1	3656 E	6.9	31.1	3656 E
CMWG	141	63.4	67.05	3.65	8.1	22.8	4636 D	8.1	22.8	4636 D
CMWG	142	33.13	36.29	3.16	7.7	21.8	4829 D	7.7	21.8	4829 D
CMWG	144	157.5	161.2	3.7	6.8	31.1	3670 E	6.8	31.1	3670 E
CMWG	144	177.08	181.22	4.14	7.3	21.9	4870 D	7.3	21.9	4870 D
CMWG	151	125.61	129.34	3.73	7.2	23.6	4650 D	7.2	23.6	4650 D
CMWG	152	156.45	160.85	4.4	7.1	22.3	4843 D	7.1	22.3	4843 D
CMWG	153	50.35	53.14	2.79	7.5	34.6	3090 F	7.5	34.6	3090 F
CMWG	155	61.5	66.8	5.3	7.6	28.3	3946 E	7.6	28.3	3946 E
CMWG	161	161.81	164.47	2.66	7.3	29.3	3849 E	7.3	29.3	3849 E
CMWG	162	92	95.65	3.65	7.9	24	4498 D	7.9	24	4498 D
CMWG	163	37.54	41.31	3.77	7.8	25.6	4291 D	7.8	25.6	4291 D
CMWG	164	132.2	136.22	4.02	7.2	18.7	5326 C	7.2	18.7	5326 C
CMWG	166	173.78	176	2.22	7.2	27.3	4139 E	7.2	27.3	4139 E
CMWG	167	60.52	64.42	3.9	7.1	29.6	3835 E	7.1	29.6	3835 E
CMWG	168	165.5	168.13	2.63	8.3	19.1	5119 C	8.3	19.1	5119 C
CMWG	169	81.27	85.4	4.13	7.8	23	4650 D	7.8	23	4650 D
CMWG	170	81.27	88.4	7.13**	6.3	35.2	3214 F	6.3	35.2	3214 F
CMWG	170	212	212.51	0.51	8	22.3	4719 D	8	22.3	4719 D
CMWG	171	47.18	51.9	4.72	7.6	25.1	4387 D	7.6	25.1	4387 D
CMWG	174	118.46	120.51	2.05	8.2	19.8	5036 C	8.2	19.8	5036 C
CMWG	175	130.24	133.75	3.51	7.5	28.5	3932 E	7.5	28.5	3932 E
CMWG	176	32	38	6	7.8	24.2	4484 D	7.8	24.2	4484 D
CMWG	177	143.92	146.93	3.01	7.9	22.5	4705 D	7.9	22.5	4705 D
CMWG	178	36.24	38.31	2.07	6.9	33.4	3339 F	6.9	33.4	3339 F
CMWG	179	42.03	47.42	5.39	8.4	22.6	4622 D	8.4	22.6	4622 D
CMWG	180	46.82	51.7	4.88	7.3	22.9	4732 D	7.3	22.9	4732 D
CMWG	184	96.11	100.01	3.9	7.3	27.2	4139 E	7.3	27.2	4139 E
CMWG	185	44.35	49.75	5.4	8.1	21.1	4870 D	8.1	21.1	4870 D
CMWG	187	44.35	53	8.65**	7.7	24.7	4429 D	5.4	43.7	2124 G
CMWG	188	35	40.65	5.65	6.3	31.7	3656 E	6.3	31.7	3656 E
CMWG	188	50	53.5	3.5	7	29.7	3835 E	7	29.7	3835 E
CMWG	189	27.04	29.95	2.91	7.5	29.7	3766 E	7.5	29.7	3766 E
CMWG	211*	55.1	57.34	2.24	8.4	18.6	5174 C	8.4	18.6	5174 C
CMWG	212**	19.5	24.8	5.3	6.6	33.6	3352 F	6.6	33.6	3352 F

Calculation for

1

3

As
Revised Rate
Note: (1)
(2) Variation co.
as per disc
Revised

Note (1) Dhorwas O

(2) Base Rate add

(3) Variation consid

assumed as 35%

(4) SCCL Formulae

by R

(5) No variation due t

(6) Increase in cost/n

equivalent to inc

(7) Similar logic as v

(8) Lift includes lift in c

Planned Lead as per contract (kms)	Actual Lead (k)
0.5	0
0.5	1
0.5	1
0.5	2
0.5	2
0.5	3
0.5	3
0.5	4

Base l

Planned Lead as per contract (kms)	Actual Lead (km)
0.5	0.5
0.5	1.0
0.5	1.5
0.5	2.0
0.5	2.5
0.5	2.7
0.5	3.0
0.5	3.2
0.5	3.5
0.5	3.75
0.5	4.00

ANNEXURE - "V"

Calculation for Escalation due to Diesel Prices & lead/lift for medium hard strata with respect to outsourcing/hiring HEMM at Gauri-II OCM for adoption at Sakhari-Irawati (Pauni-III) OC.

Year of work order: 2007-08
Current date: March, 2009

1	Rate of Diesel (Rs/l)	34.58	34.08
	Diff. in Diesel rate (Rs/l)	-0.50	
3	Planned Lead for the existing contract (km)	Range from 0.136 km to 0.991 km	0.563
	Assumed Rate as per tender No. 08/2007-08 for Gauri-II OC mine		50.71
	Revised Rate updated November, 2008 after Escalation as per SCCL Norms (Rs per m3)		50.66

Note: (1) Escalation Formula as per SCCL order No. MOC.29 dt 23/08/1999

(2) Variation considered only for transportation component of total rate, which is assumed as 35% as per discussions with CGM(CMC), WCL HQ on 30/04/2001

Revised Rate = Assumed Rate * 0.35 * ((New rate/Old rate) * 0.20 + 0.80) + Assumed rate * 0.65

Calculation for Variation due to Lead & Lift w.r.t. Gauri-II OCM for adoption at Sakhari-Irawati (Pauni-III) OC mine

Note (1) Dhorwas OCM Contract is for lead of 0.55 km & average lift of 59 m (41m below GL & 18m above GL)

(2) Base Rate adopted as calculated above & updated to November 2008

(3) Variation considered only for transportation component of total rate, which is assumed as 35% as per discussions with CGM(CMC), WCL HQ on 30/04/2001

(4) SCCL Formulae considered for calculation is as follows

Rev. Rate * 0.35 * (0.65 + 0.35 * actual lead / 0.65 + 0.35 * planned lead) + Rev. Rate * 0.65

(5) No variation due to lead assumed 55m lift as in earlier Haranhatta contract

(6) Increase in cost/m³ at 20m intervals beyond 55m assumed as equivalent to increase in rate at 1 km increase in lead

(7) Similar logics as in (5) adopted for rates pertaining to lift upto 25m

(8) Lift includes lift in quarry & lift in dumps

Planned Lead as per contract (kms)	Actual Lead (kms)	Rev. Rate as per SCCL formulae for total lift 25-55m (March 2009)	Increase in rate at 100km increase in lead	Rev. Rate as per SCCL formulae for total lift 0-25m (March 2009)	Rev. Rate as per SCCL formulae for total lift 55-85m (March 2009)	Rev. Rate as per SCCL formulae for total lift 85-115m (March 2009)	Rev. Rate as per SCCL formulae for total lift 115m - 145m (March 2009)	Rev. Rate as per SCCL formulae for total lift 145-175m (March 2009)	Rev. Rate as per SCCL formulae for total lift 175-205m (March 2009)
0.5	0.50	50.66		44.15	57.16	63.67	70.17	76.68	83.18
0.5	1.00	53.91		47.41	60.42	66.92	73.43	79.93	86.43
0.5	1.50	57.16	6.50	50.66	63.67	70.17	76.68	83.18	89.69
0.5	2.00	60.42	6.50	53.91	66.92	73.43	79.93	86.43	92.94
0.5	2.50	63.67	6.50	57.16	70.17	76.68	83.18	89.69	96.19
0.5	3.00	66.92	6.50	60.42	73.43	79.93	86.43	92.94	99.44
0.5	3.50	70.17	6.50	63.67	76.68	83.18	89.69	96.19	100.35
0.5	4.00	73.43	6.50	66.92	79.93	86.43	92.94	99.44	103.60

Base Rate		10% increase due to planning purpose								
Planned Lead as per contract (kms)	Actual Lead (kms)	Rev. Rate as per SCCL formulae for total lift 25-55m (March 2009)	Increase in rate at 100km increase in lead	Rev. Rate as per SCCL formulae for total lift 0-25m (March 2009)	Rev. Rate as per SCCL formulae for total lift 55-85m (March 2009)	Rev. Rate as per SCCL formulae for total lift 85-115m (March 2009)	Rev. Rate as per SCCL formulae for total lift 115m - 145m (March 2009)	Rev. Rate as per SCCL formulae for total lift 145-175m (March 2009)	Rev. Rate as per SCCL formulae for total lift 175-205m (March 2009)	Rev. Rate as per SCCL formulae for total lift 175-205m (Dec. 2007)
0.5	0.50	50.66		48.57	55.72	62.88	70.03	77.19	84.35	91.50
0.5	1.00	53.91		52.15	59.30	66.46	73.61	80.77	87.92	95.08
0.5	1.50	57.16	6.50	55.72	62.88	70.03	77.19	84.35	91.50	98.66
0.5	2.00	60.42	6.50	59.30	66.46	73.61	80.77	87.92	95.08	102.23
0.5	2.50	63.67	6.50	62.88	70.03	77.19	84.35	91.50	98.66	105.81
0.5	2.75	65.29	6.50	64.67	71.82	78.98	86.13	93.29	100.44	107.60
0.5	3.00	66.92	6.50	66.46	73.61	80.77	87.92	95.08	102.23	109.39
0.5	3.25	68.55	6.50	68.25	75.40	82.56	89.71	96.87	104.02	111.18
0.5	3.50	70.17	6.50	70.03	77.19	84.35	91.50	98.66	105.81	112.97
0.5	3.75	71.80	6.50	71.82	78.98	86.13	93.29	100.44	107.60	114.75
0.5	4.00	73.43	6.50	73.61	80.77	87.92	95.08	102.23	109.39	116.54



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संद्रल माईन प्लानिंग एन्ड डिजाइन इंस्टीट्यूट लिमिटेड
(कोल इंडिया लिमिटेड की एक सहायक कंपनी)
क्षेत्रीय संस्थान - ४, कस्तूरबा नगर, जरीपटका, नागपुर - ४४० ०१४
**Central Mine Planning & Design Institute
Limited**
(A Subsidiary of Coal India Limited)
Regional Institute - IV, Kasturba Nagar, Jaripatka, Nagpur - 440 014



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पत्रांक: 290

दिनांक:

सेवा में,
निदेशक तकनीकी (योजना एवं परियोजना)
वेस्टर्न कोलफिल्ड्स लिमिटेड
कोल इस्टेट, सिविल लाइन,
नागपुर

विषय: प्लानिंग कमिटी की बैठक का विवरण

महोदय

अंग्रेजी में हमारे पत्रांक सं RIN/ PLANNING COMMITTEE MEETING/2009/205
दिनांक 31 March 2009 आपके अवलोकनार्थ एवं उचित कारवाई हेतु संलग्न है।

धन्यवाद एवं सदैव अपनी सर्वोत्तम सेवाओं के आश्वासन सहित।

संलग्नक : यथोपरि

भवदीय

फाल्गुनी गुहा
११/४/०९
क्षेत्रीय निदेशक

Shi 10M

रजि. कार्यालय : गोंदवाना प्लेस, कान्के रोड, रांची - ८३४ ०३१
Regd. Office : Gondwana Place, Kanke Road, RANCHI - 834 031

CENTRAL MINE PLANNING & DESIGN INSTITUTE LTD
REGIONAL INSTITUTE-IV
KASTURBA NAGAR, JARIPATKA
NAGPUR - 440014

No.RIN/MINUTES OF MEETING/2009/ 205

March 31, 2009

Minutes of Planning Committee Meeting to discuss :

- A) Draft Project Report for Pauni-III O/C Mine
- B) Draft Project Report for Chinchala-Chikalgaon Amalgamated O/C Mine
- C) Draft Project Report for Gandhigram U/G Mine
- D) Draft Project Report for Yekona-I Extn. O/C Mine
- E) Draft Project Report for Kamptee Deep O/C Mine

Planning Committee Meeting to discuss the above listed 5 nos. Draft Project Reports was convened on 30/3/2009 (FN) in the Board Room at WCL (HQ).

Shri D.C. Garg, CMD, WCL, graced the meeting by his presence and also chaired the meeting. All Functional Directors of WCL actively participated in the discussion. The list of participants is enclosed at Annexure-A.

The salient features of the Draft Project Reports were explained sequentially by Regional Director, CMPDI, Nagpur and his team. After detailed discussion on the technical and financial parameters of each Draft PR, following decisions were taken.

A) Draft Project Report for Pauni-III O/C Mine

1. In the final Project Report, option with Partial Hiring may be projected as main option.
2. The committee opined that the Project may be renamed as Sakhari-Iravati (Pauni-III) Opencast mine.
3. It was decided that appropriate authority may be informed regarding proposed nalla diversions.
4. Possibility of keeping one Coal transportation road may be studied for catering neighbouring existing and proposed mines..
5. The Current market rate of land and complete Khasra plan & detailed Land records (7/12) of the land to be acquired for the proposed project will be submitted by Ballarpur Area of WCL at the earliest.

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B) Draft Project Report for Chinchala-Chikalgaon Amalgamated O/C Mine

It was decided in the Planning Committee Meeting to recast the proposed Draft PR of Chinchala-Chikalgaon Amalgamated O/C Project considering following :

1. It was suggested to avoid rehabilitation of Rajur/Bhandewada villages keeping 100m safe working distance from the village boundaries. If not possible, then explore the possibility of exploitation of coal in the above area in the last stage of project life. It was also decided to sub-divide the whole project such as Chikalgaon Sub-Quarry by keeping safe distance from Rajur village, Rajur Bhandewada Sub-Quarry which involves rehabilitation of Rajur-Bhandewada villages (to be executed at the end of mine life), Bhandewada Sub-Quarry keeping safe distance from Bhandewada village, Chinchala Sub-Quarry and an additional Pisgaon Sub-Quarry, which will be an additional sub-quarry in Pisgaon geological block adjacent to Chinchala Block.
2. To enhance the annual target of the mine from the proposed 4.50 Mt per annum.
3. To explore the possibility of mining upto a maximum depth.
4. To provide evacuation of coal by inpit crushing at coal face and belt conveying upto siding.
5. To consider the rapid loading system in siding.
6. To consider installation of separate coal washery in this project.
7. To propose 120m external dump from ground level with appropriate scientific slope stability studies.
8. To consider big size HEMM fleet for removal of overburden such as 20m³ Shovel/190T Dumper or 12m³ Shovel/150 T Dumper in the departmental/ partial hiring options.
9. To explore the possibility of 2/3 independent opencast projects in the proposed quarry area for better administration.

C) Draft Project Report for Gandhigram U/G Mine

1. The boundary of the proposed mine would be restricted to Sector-C and Sector-D of Gandhigram Geological Block only.
2. Target capacity of the proposed mine would be maintained at 1.17 Mty by deploying 3 nos. low height continuous miner package.
3. Possibility of locating the inclines and airshaft away from faults should be explored.

170

(Annexure VI)

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4. Sector-IV of Tawa Extension Geological Block shall be worked either from Tawa-II U/G Mine or from a separate set of mine entries. Decision regarding this would be taken at a later date.
5. Partial Hiring Option should be recommended for approval on cost plus basis.

D) Draft Project Report for Yekona-I Extn. O/C Mine

In the Planning Committee Meeting it was decided to consider this report after quarry operation of neighbouring mines such as Yekona-I O/C and Yekona-II O/C, which have already been approved by WCL Board in 2004 and 2005, where land acquisition process is under progress. Hence, this report of Yekona-I Extn. O/C is proposed to be shelved till further directives by WCL authorities.

E) Draft Project Report for Kamptee Deep O/C Mine

The Draft PR of Kamptee Deep OC Mine has been prepared upto a depth of 200m at the floor of bottom-most seam. It was decided in the meeting to plan Kamptee Deep OC Mine including the dip side area upto Kanhan river. Since the dip side area is presently not explored/proved, it was decided to first explore the area. The preparation of PR of Kamptee Deep OC Mine will be taken up after exploration of dip side area and formulation of Geological Report.

The meeting ended with a vote of thanks to the chair.


31/1/09
REGIONAL DIRECTOR

ANNEXURE - A

LIST OF PARTICIPANTS

Sl.No.	Name	Designation
(A)	WCL (HQ)	
1.	Shri D.C. GARG	CMD, WCL
2.	Smt. I. A. Dani	Director (F), WCL
3.	Shri B.K. Saxena	Director (Tech.) (Op.), WCL
4.	Shri Omprakash	Director (Tech) (P&P), WCL
5.	Shri A. K. Singh	GM (P&P), WCL
6.	Shri Abhay Kumar	CME (Land & Rev.)
7.	Shri A. Pandey	CME (O/C)
8.	Shri D.D. Daharwal	GM (S&C)
9.	Shri M.K. Singh	TS to CMD
10.	Shri S.A. Ali	CME (NT/Plg.)
11.	Shri A.C. Ray	OSD, Envt.
12.	Shri P.P. Chaudhury	Dy. CE (E&M)
13.	Shri S.P. Pandey	Dy. CME (Plg.)
14.	Shri R. Narayanan	FM (Plg.)
15.	Shri J.M. Alkari	SOM (Plg.)
16.	Shri Arun Kumar	FM (CB)
17.	Shri M.B. Agrawal	Dy. CE (C)
(B)	WCL, MAJRI AREA	
1.	Shri A. G. Mukherjee	CGM, Majri Area
2.	Shri S.K. Zakir Hussain	APO, Majri Area
(C)	WCL, WANI NORTH AREA	
1.	Shri S.S. Karnawat	CGM, Wani North Area
2.	Shri Y. Tiwari,	SAM, Rajur Sub-Area
3.	Shri Md.Y.A. Qureshi	Sr. S.O. Rajur, WNA
(D)	WCL, NAGPUR AREA	
1.	Shri C.S. Singh	GM (Op)
2.	Shri S.S. Paranjape	A.P.O. (N)
(E)	CMPDI, RI-IV, NAGPUR	
1.	Shri Phalguni Guha	Regional Director
2.	Shri S.K. Sinha	CME/HOD (OC)
3.	Shri A. Chaudhury	CE (E&M)
4.	Shri R.K.S. Chauhan	Dy.CG
5.	Shri G Moitra	Dy.CE (E&M)
6.	Shri I.D. Narayan	Dy. CME
7.	Shri K.M. Rao	FM
8.	Shri Anjani Kumar,	SE (Civil)
9.	Shri Manoj Kumar	SOM
10.	Shri Rajesh Ahuja	SOM
11.	Shri G.S. Gahlot	SOM
12.	Shri K. Viswanathan	FM
13.	Shri G.Y.P. Reddy	SOM
14.	Shri Shantanu Shrivastava	Sr. EE (Excv)
15.	Shri S.S. Rao	Sr. Under Manager



Region
IV, CMP
Nagpur
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CGM (P)

RE - A



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आईएसओ 9001
कम्पनी
CMPDI
ISO 9001 Company

सेंट्रल माइन प्लानिंग एण्ड डिजाइन इन्स्टीच्यूट लिमिटेड

गोन्दवाना प्लेस, काँके रोड, राँची - 834031 (झारखंड) भारत
Central Mine Planning & Design Institute Limited
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ANNEXURE - III

572
No D5/G-54/2638/A
Date: 16.1.2009

Regional Director
IV, CMPDI
Ranchi
Tel: 0712-2643231



Sub: Comments on Pauni-III OC mine

Sir,

Draft PR for Pauni-III OC mine for 1.25 Mtpy target production at stripping ratio of 6.54 cum/t has been received and our observations are as follows:

1. Same rate of OB removal in the calendar plan is not necessary in the departmental, as well as, hiring option. The calendar plan for OBR may be reviewed in the hiring option so that economics may improve marginally. The peak OB may be kept as 8.15 mm³ in the hiring option upto first 15 years. In addition, mining losses may be considered as 15 cm at each contact point as per letter No D5/G-64/2754 dt. 29th Aug. 1989.
2. Master Plan for nalla diversion in Sasti sub area specially Pauni and Gauni group of mines may be conceived and based on it, nalla diversion may be proposed. Some provision may be made in the PR for Master Planning of nalla diversion in the area.
3. There is a need to increase internal dumping as void left at the end of mining operation is very high.
4. Mine closure cost may be kept at Rs 6/t.

Thanking you

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Yours faithfully
[Handwritten signature]
(H.S. WALIA)
Chief General Manager (OC)

Director (T.P&D)
CGM (P&D) - for kind information

DRAFT FOR APPROVAL

Director (T)(P&D)

C G M (PAD)

RECORD NOTE OF DISCUSSIONS HELD ON 19.1.2009 DURING THE PRESENTATION
OF DRAFT PR FOR PAUNI-III OC, WCL (1.25 MTY)

The above report was presented by RD. RI-IV and his team in the forenoon of 19.1.09 in the Board Room of CMPDI (HQ) for obtaining guidance of CMPDI (HQ) before finalization of the report. The list of participants is enclosed.

During the discussions, the following decisions were taken

- 1) Partial Hiring Variant with target capacity of 1.50 MTY should also be worked out and included in the report if this variant shows desired economic viability.
- 2) A master plan for nala diversion and drainage system in the Ballarpur Area of WCL should be prepared. Some provision may be kept in this PR for this master planning.
- 3) The dilution at each contact point of the seam with OB should be kept as 15 cm instead of 5 cm taken in the draft PR.
- 4) The possibility of locating the workshop on the dip side of the quarry and locating the colony at the central location near Gouri colony should be examined.
- 5) Suitable justification should be given in the report for the high amount of land requirement for boundary rationalization.
- 6) For OBR, 160 mm drills should be provided instead of 250 mm drills provided in the draft PR.
- 7) Number of dumpers provided in OBR should be examined and reduced as it seems to be high.
- 8) Provision of one wheel dozer should be made in 'Common' HEMM.
- 9) The manpower provision in partial and total hiring options should be examined as they appear to be high. The difference between OMS of partial hiring and total hiring options seems to be very high. This also should be examined.
- 10) The mine closure cost should be taken @ Rs. 6 / Tonne of coal production.
- 11) The figure for desired selling price to achieve 12 % IRR at 85 % production level should not be given in the report if the IRR at 85 % level is already coming to be more than 12 %.
- 12) The comments / observations submitted by other departments of CMPDI (HQ) should also be taken into consideration while finalizing the report.

02