

Chapter 4A: Mining Operations

4A.1.1: Existing Method of Mining				Mechanized	
Choose one or more	HEMM with deephole drilling	Combination of loaders and tippers	None	None	
4A.1.2: Proposed Method of Mining				Mechanized	
Choose one or more	HEMM with deephole drilling	Combination of loaders and tippers	None	None	
Reasons for Proposed Changes				No Changes in Existing and Proposed Method of Mining	

4A.2: Operational Parameters

4A.2.1: Inventory of Existing Pits & Dumps

4A.2.1.1: Pits

Sl.No.	Pit ID	Pit Status	Area Covered by Pit(Ha)	Pit Dimensions(L*W*D)
1	Pit-1	Active	1.9400	195.0*99.5*25
2	Pit-2	Active	9.8700	545.5*180.9*6
3	Pit-3	Active	14.3500	841.0*170.7*25
4	Pit-4	Active	12.2800	664.7*184.7*22

4A.2.1.2: Dumps and Stacks

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4A.2.1.2.1: Dump Details

SI.No.	Dump ID	Dump Status	Type of Dump	Total of Dump Quantity(t)	Area Covered by Dump(Ha)	Height(m)	Latitude (dd:mm:ss.ss)		Longitude (dd:mm:ss.ss)	
							From	To	From	To
1	WD-1	Active	Waste	312840.00	1.61	22.00	24:27:06.18	24:27:03.56	83:03:41.24	83:03:48.90
2	WD-2	Dead	Waste	100.00	1.21	0.41	24:27:07.09	24:27:04.52	83:04:14.85	83:04:22.64
3	WD-3	Dead	Waste	120.00	1.17	0.46	24:27:06.49	24:27:02.37	83:04:33.69	83:04:38.21
4	WD-4	Active	Waste	124200.00	0.92	15.00	24:27:05.16	24:26:58.91	83:04:36.29	83:04:42.16
5	WD-5	Dead	Waste	145.00	2.44	0.27	24:27:07.85	24:27:02.01	83:04:44.82	83:04:51.59

4A.2.1.2.2: Stack Details

SI.No.	Stack ID	Type of Stack	Total Stack of Quantity(t)	Area Covered by Stack(Ha)	Height(m)	Latitude (dd:mm:ss.ss)		Longitude (dd:mm:ss.ss)	
						From	To	From	To
1	Mineral Storage	Stack for mineral	7175	0.37	1.92	24:27:04.98	24:27:06.94	83:03:51.41	83:03:54.81

4A.2.1.3: Details of stabilised dumps

SI.No.	Dump ID	Number of Terraces	Average Height of Terraces(m)	Lenght of Toe Wall(m)	Lenght of Garland Drain(m)	Area Stablized(Ha)	Method of Stablization
1	Nil	Nil	0.00	0.00	0.00	0.00	NA

4A.2.2: Opencast Mining**4A.2.2.1: Bench Parameters**

Pit ID	Year	Max Height of the	Min Width of the Benches in	Slope of the Bench in Over	Max Height of the	Minimum Width of the	Slope of the Bench in Mineral	Overall Slope of Pit	Number of Benches in Top Soil	Number of Benches in Over	Number of Benches in Mineral	Max Depth of Workings	Depth of Water Table	Max Slope Angle of Haul

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		Benches in Over Burden (m)	Over Burden (m)	Burden (degree)	Benches in Mineral (m)	Benches in Mineral (m)	(degree)	(degree)		Burden		(m)	(mRL)	Roads (1xx in)
Pit-1	2026-2027	0.00	0.00	0.00	9.00	9.00	80.00	45.00	0	0	2	17.00	161.00	1:16
Pit-1	2027-2028	0.00	0.00	0.00	9.00	9.00	80.00	45.00	0	0	3	17.00	161.00	1:16
Pit-1	2028-2029	0.00	0.00	0.00	9.00	9.00	80.00	45.00	0	0	3	26.00	161.00	1:16
Pit-1	2029-2030	0.00	0.00	0.00	9.00	9.00	80.00	45.00	0	0	3	26.00	161.00	1:16

4A.2.2.2: Yearwise Opencast Development - I Continue

SI.No.	Year	Pit ID	Bench	Direction	Bulk Density of Overburden (BD1) (ton/m ³)	Bulk Density of Mineral (BD2) (tonn/m ³)	Top Soil Volume (Length x Width x Height) (m ³)	Over Burden Volume (Length x Width x Height) (m ³)	Over Burden Quantity (t)	ROM Volume (Length x Width x Height) (m ³)	ROM Quantity (t)	Recovery	Mineral Reject (t)	Production Main (t)	Production Associated (t)	OB Ratio to Ore (m ³ /ton)
1	2026-2027	Pit-1	1st - 209 RL	NW	2.00	2.50	0.00	0.00	0.00	15404.32	38510.80	1.00000	0.00	38510.80	0.00	Nil
2	2026-2027	Pit-1	2nd - 200 RL	N	2.00	2.50	0.00	0.00	0.00	21826.13	54565.33	1.00000	0.00	54565.33	0.00	Nil
3	2027-2028	Pit-1	2nd - 200 RL	NE	2.00	2.50	0.00	0.00	0.00	25547.25	63868.11	1.00000	0.00	63868.11	0.00	Nil
4	2027-2028	Pit-1	2nd - 200 RL	NW	2.00	2.50	0.00	0.00	0.00	11689.96	29224.91	1.00000	0.00	29224.91	0.00	Nil
5	2028-2029	Pit-1	2nd - 200 RL	NW	2.00	2.50	0.00	0.00	0.00	7742.84	19357.11	1.00000	0.00	19357.11	0.00	Nil
6	2028-2029	Pit-1	3rd - 191 RL	N	2.00	2.50	0.00	0.00	0.00	29615.13	74037.82	1.00000	0.00	74037.82	0.00	Nil
7	2029-2030	Pit-1	3rd - 191 RL	N	2.00	2.50	0.00	0.00	0.00	30112.02	75280.05	1.00000	0.00	75280.05	0.00	Nil
Total									0.00		354844.1		0.00	354844.1	0.00	

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4A.2.2.2 Yearwise Opencast Development - I End

Sl.No.	Year	Pit ID	Total Topsoil Volume (m ³)	Total Over Burden Volume (m ³)	Total Over Burden Quantity (t)	Total ROM Volume (m ³)	Total ROM Quantity (t)
1	2026-2027	Pit-1	0.00	0.00	0.00	37230.45	93076.13
2	2027-2028	Pit-1	0.00	0.00	0.00	37237.20	93093.02
3	2028-2029	Pit-1	0.00	0.00	0.00	37357.97	93394.93
4	2029-2030	Pit-1	0.00	0.00	0.00	30112.02	75280.05
Total			0.00	0.00	0.00	141937.64	354844.13

4A.2.2.3: Transportation & Hauling Equipment

Sl.No.	Type	Make	Capacity (m ³)	No. of Equipments
1	Tipper	MAN	12.00	4

4A.3: Material Handling Summary**4A.3.1: Studies Undertaken**

Title	Study Undertaken	Attachment (only pdf allowed)
Blast Vibration Study Report	Yes	Ground Vibration Report of Dalla (Kajrahat).pdf
Slope Stability Study Report	No	Nil
Recovery Study Report	No	Nil
Hydrological Study Report	No	Nil
Mineral Beneficiation Study Report	No	Nil
Subsidence Study Report	No	Nil

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Geotechnical Study Report	No	Nil
Any Other Study Report	Yes	<u>Petrographic & Mineralogical Studies Dalla (Kajraha) LS Mine 2025.pdf</u>
Bulk Density Study Report	Yes	<u>Dalla Cement (Bulk Density).pdf</u>

4A.3.2: Insitu Mining

SI.No.	Year	Waste Quantity(t)	ROM Quantity(t)	Total Handling (t)	ROM Quantity Saleable Mineral (t)	ROM Quantity Mineral Reject (t)	OB Ratio to Ore (Waste Quantity / ROM Quantity)	Grade Range (%)
1	2026-2027	0.00	93076.13	93076.13	93076.13	0.00	0.00	CaO: 41.76 44.84%, MgO: 1.39- 4.0%
2	2027-2028	0.00	93093.02	93093.02	93093.02	0.00	0.00	CaO: 41.76 44.84%, MgO: 1.39- 4.0%
3	2028-2029	0.00	93394.93	93394.93	93394.93	0.00	0.00	CaO: 41.76 44.84%, MgO: 1.39- 4.0%
4	2029-2030	0.00	75280.05	75280.05	75280.05	0.00	0.00	CaO: 41.76 44.84%, MgO: 1.39- 4.0%
5	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
	Total	0.00	354844.13	354844.13	354844.13	0.00		

4A.3.3: Dump workings

SI.No.	Year	Dump ID	Latitude (dd:mm:ss.ss)		Longitude (dd:mm:ss.ss)		Area (m2)	Avg Height of Dump (m)	Volume (m ³)	Total Dump Quantity (t)	Proposed Dump Handling Quantity (t) (A)	Proposed Recovery of Saleable Mineral (t)(B)	Proposed Waste Quantity (t) (A-B)	Grade Range (%)	Justification
			From	To	From	To									

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1	2026-2027	NIL													
2	2027-2028	NIL													
3	2028-2029	NIL													
4	2029-2030	NIL													

4A.3.4: Calculation Summary

Year	2026-2027	2027-2028	2028-2029	2029-2030	Total
(A) Total ROM quantity (t)	93076.13	93093.02	93394.93	75280.05	354844.13
(B) Saleable ore from ROM (t)	93076.13	93093.02	93394.93	75280.05	354844.13
(C) Proposed Dump Handling Quantity (t)	0.00	0.00	0.00	0.00	0.00
(D) Saleable Ore recovered from dump workings (t)	0.00	0.00	0.00	0.00	0.00
(E) Total Saleable Ore (t)(=B+D)	93076.13	93093.02	93394.93	75280.05	354844.13
(F) Total Quantity Handled (t)(=A+C)	93076.13	93093.02	93394.93	75280.05	354844.13

4A.4: Machine Calculation

4A.4.1: Machine Requirement Summary

Number of Average Working Days in One Year (A)	300
Number of Shifts per Day (B)	1

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