



## Maihar Cement

(A DIVISION OF CENTURY TEXTILES & INDUSTRIES LTD.) AN IS / ISO 9001 & ISO 14001 COMPANY  
P.O. SARLANAGAR-485772, MAIHAR, DISTT. SATNA (M.P.) Phone: 07674-277043, 277067, 277068, 277350  
Fax : 07674-276323, 277806,277836 e-mail : mc.mines@centurycement.com



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# WELCOME

## THRESHOLD VALUE OF MINERALS WORKSHOP NAGPUR.



PRESENTED BY :-

SAURABH KUMAR JAIN

GM (GEOLOGY) MAIHAR CEMENT



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# ***A Case study of Bhadanpur limestone Mines, Maihar, Satna M.P.***

## **IMPACT OF THRESHOLD VALUE IN THE MANUFACTURING OF CEMENT**

**With respect to notification dated 16 oct 2009 regarding use of limestone deposit under Rule 54 of the Mineral Conservation and Development Rules 1988.**

**Mineral Threshold Value :-**

**LIMESTONE (i) FOR LIMESTONE DEPOSITS IN CHHATTISGARH, GUJARAT, HIMACHAL PRADESH, MADHYA PRADESH, MAHARASHTRA RAJASTHAN, UTTARAKHAND & UTTAR PRADESH :- CaO – 34% (Min), MgO- 4% (Max)**



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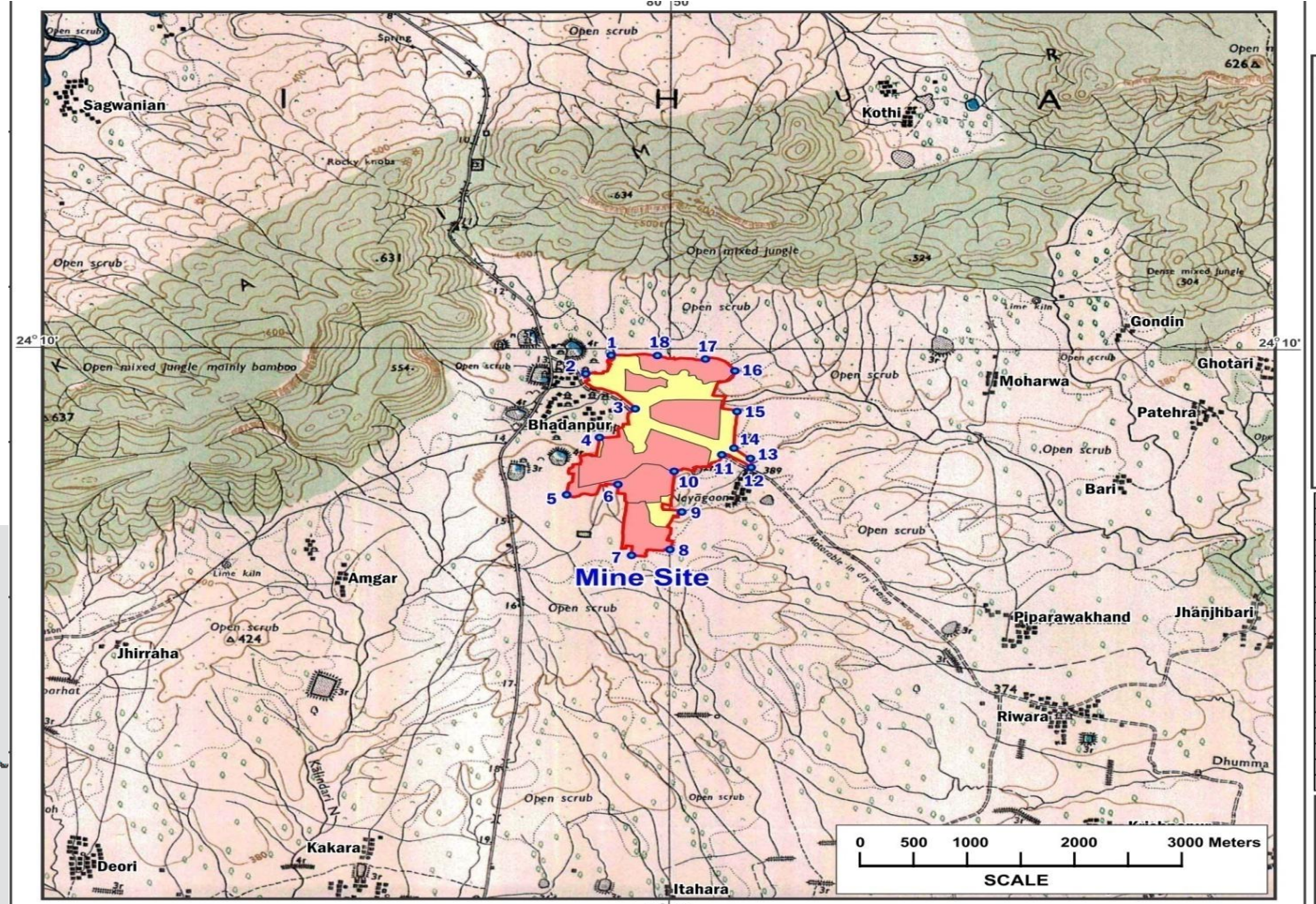
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### ➤ **INTRODUCTION:-**

- **Maihar Cement is a division of Century Textiles and Industries Ltd, a flagship company of BK Birla Group.**
- **The company is well diversified having interest in Cement, Textiles, Rayon, Chemicals, Pulp and Paper.**
- **There are three Integrated Cement Plants located at Chhattisgarh, Maharashtra, Madhya Pradesh & One Grinding Unit at West Bengal.**
- **Maihar Cement is situated at Sarlanagar (Maihar) Dist. Satna in the State of Madhya Pradesh with an installed capacity of 4.20 Million TPA.**
- **Our product are BIRLA GOLD ROYAL , BIRLA GOLD PREMIUM & BIRLA GOLD CLASSIC.**
- **Maihar Cement have four mining leases namely M.L.296.956 ha.,217.681 ha.663.00 ha.&193.952 ha. For the mineral limestone & located at Maihar Tehsil Dist. Satna M.P.**
- **Our limestone deposits belongs lower Vindhyan Super Group, Semri Series ,Rohtas Stage.**

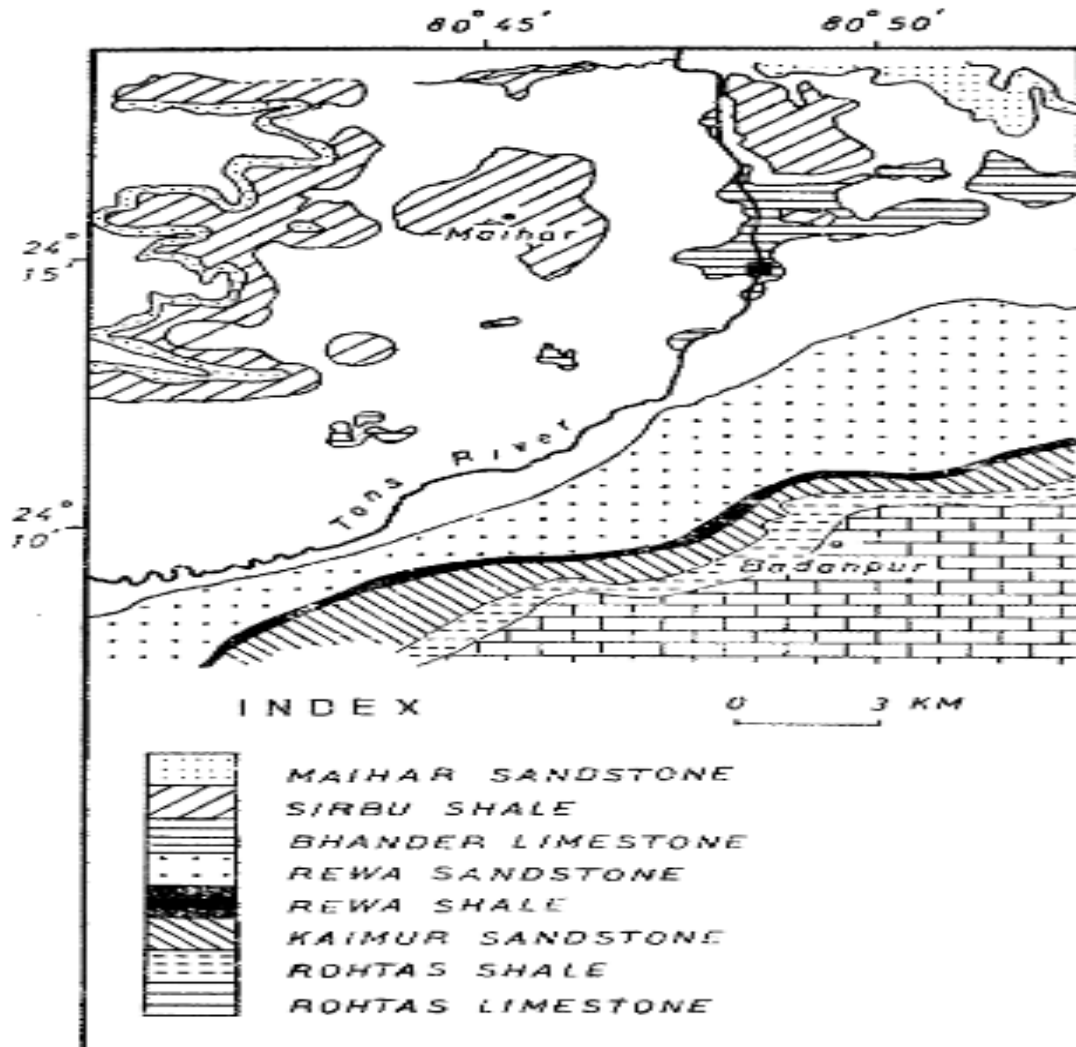


## LOCATION OF CEMENT PLANT & MINING LEASE AREA :-



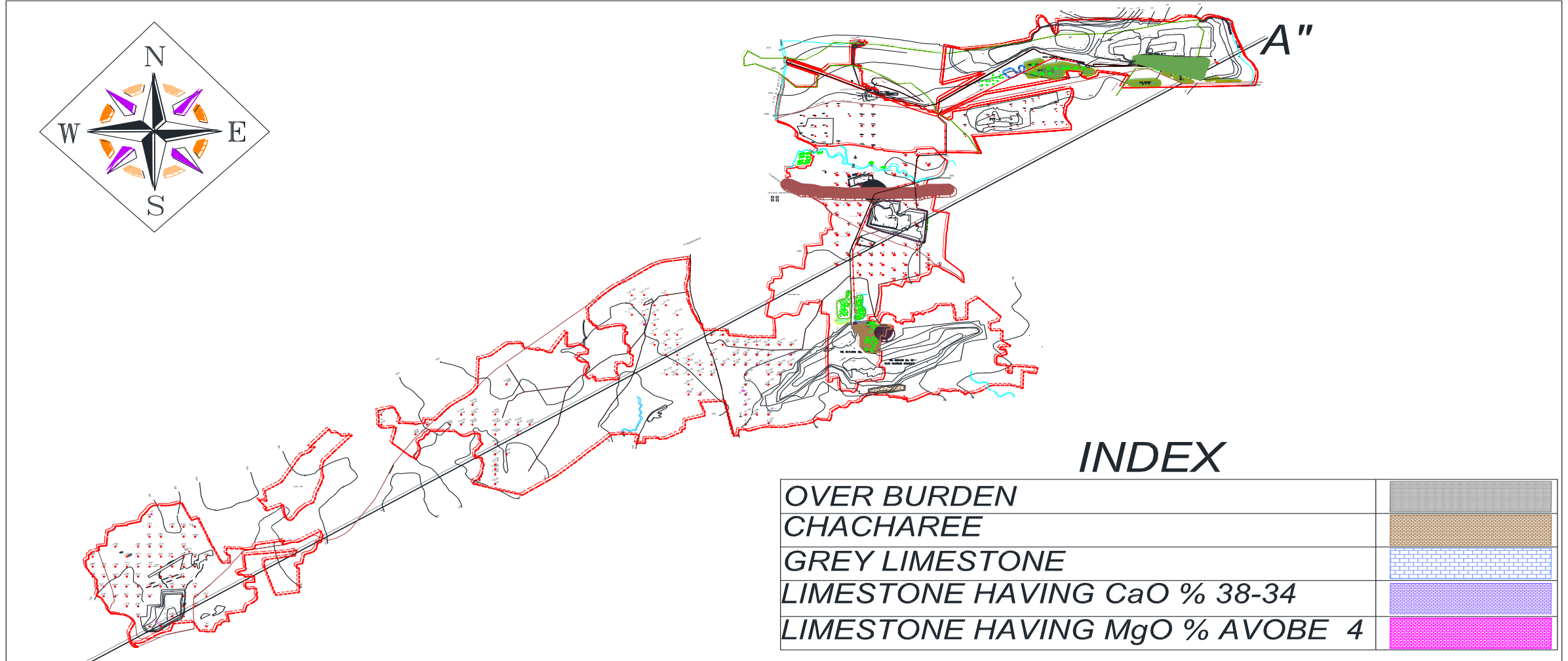


## REGIONAL GEOLOGY OF AREA:-

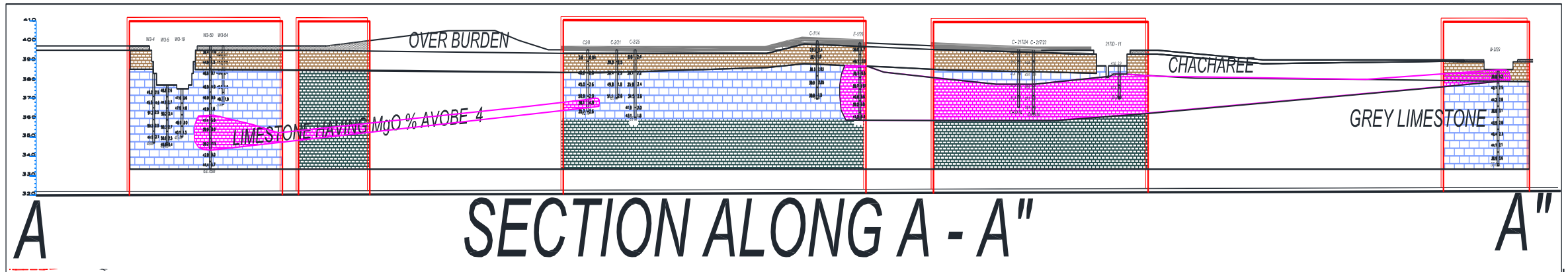
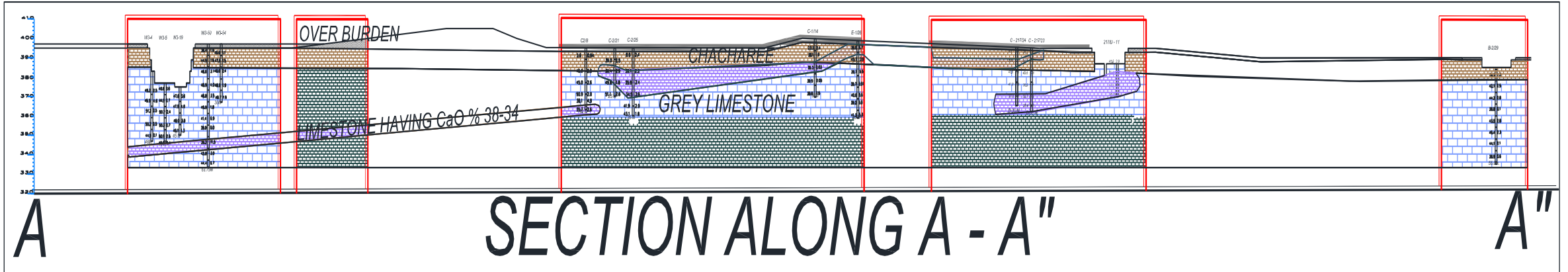


	Group	Formation	Member
Upper Vindhyan	Bhandar Group	Maihar Sandstone	
		Sirbu Shale	
		Bhandar Limestone	
		Ganurgarh Shale	
	Rewa Group	Upper Rewa Sandstone	
		Jhiri Shale	
		Lower Rewa Sandstone	
	Kaimur Group	Panna Shale	
		Dhandhraul Quartzite	
		Scarp Sandstone	
Bijaigarh Shales			
Upper Quartzite			
Susanai Breccia			
		Silicified Shales	
		Lower Quartzite	
-----Unconformity-----			
Lower Vindhyan	Semri Group	Rohtas Formation	Limestone and Shale
		Kheinjua Formation	Glauconitic Sandstone
		Fawn Limestone	
		Olive Shale	
		Porcellanite	Porcellanites
		Formation	
		Basal Formation	Kajrahat Limestone
		Basal Conglomerate	
-----Unconformity-----			
	Bijawar Group	Schists and phyllites	


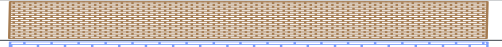

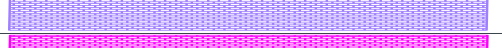

# LOCAL GEOLOGICAL PLAN OF LIMESTONE DEPOSIT :-



# LOCAL GEOLOGICAL SECTION OF LIMESTONE DEPOSIT :-



## INDEX

OVER BURDEN	
CHACHAREE	
GREY LIMESTONE	
LIMESTONE HAVING CaO % 38-34	
LIMESTONE HAVING MgO % ABOVE 4	



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## CHEMICAL BEHAVIOURS OF LIMESTONE DEPOSITS IN OUR M.L. AREA :-

In our limestone deposit , three radicals i.e. CaO%, SiO2%& MgO % are variable .  
It is estimated that from level 405 mRL to 321 mRL mostly CaO % & MgO % are variable.

level	CaO%	MgO%	Quantity in million tonnes
405-321	34	5-12	13.1
405-321	36	4.5-11	43.22
405-321	37	4.5-11	0.16
405-321	39	3-10	1.9
405-321	40	3-9	60.97
405-321	41	3-9	25.35
405-321	43	3-8.5	0.36
405-321	44	3-8	9.87
405-321	45	2-5	34.17
405-321	46	2-4	8.98
405-321	47	2-4	14.88
Total-212.96 million tonnes ,Total low grade limestone-56.32 million tonnes			





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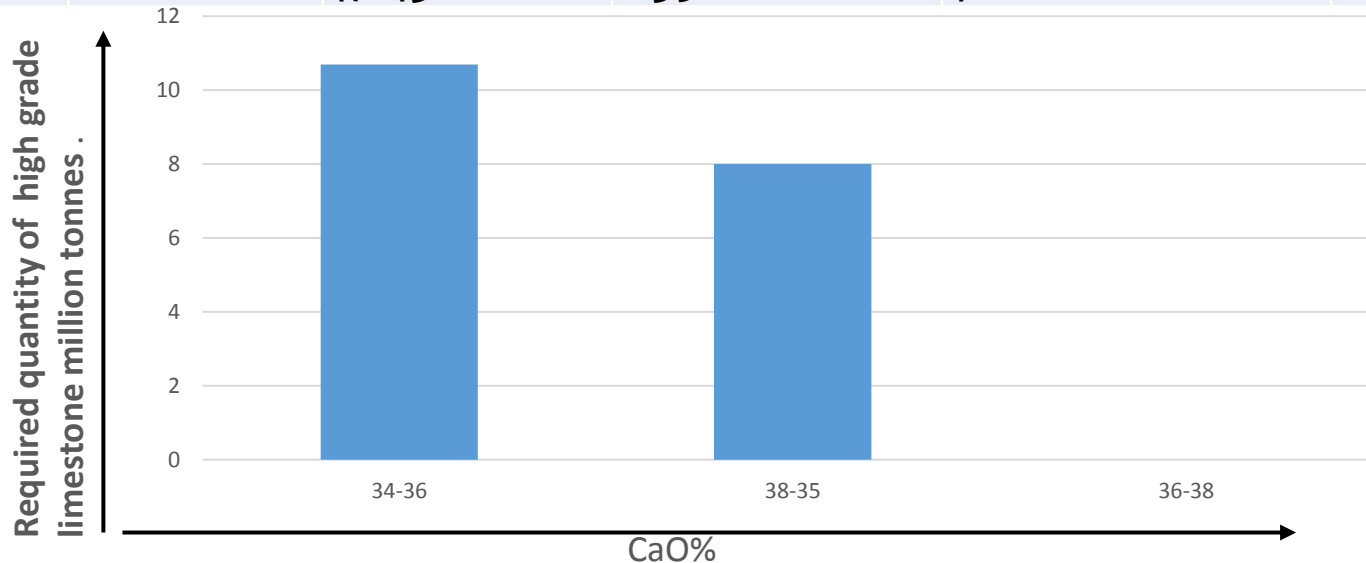
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## REQUIREMENT OF HIGH GRADE LIMESTONE FOR BLENDING OF THRESHOLD VALUE IN LIMESTONE CaO- 34 % & MgO- 4% :-

Case No	Range of (Threshold Value limestone) of Cao%	Quantity of limestone in million tonnes	Quality of high grade limestone If Cao% Range 47% -43%	Quantity of High grade limestone required for manufacturing of cement in million tonnes	Minimum Quality for cement manufacturing in Cao% for maintaining C <sub>3</sub> S upto 48%	Total Available Quantity of high grade limestone in our mines	Total Quantity of high grade limestone to be purchase in million tonnes	Cost of high grade limestone required for purchase in lac Rupees
1	34-36	56.3	47-43	78.95	41	68.26	10.69	53450
2	38-35	43.4	47-43	76.26	41.01	68.26	8	40000
3	36-38	0.2	47-43	0.35	41	68.26	0	0





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### COST IMPACT :-

Additional Cost i.e. Mining, Land cost ,High Grade limestone cost ,Pet cock cost, Modification in Plant etc.

Thus total 481.42 Rupees /tonnes will be increased till the end of mining .

### OTHER IMPACT :-

- 1-Landuse pattern will be disturbed due to stacking of threshold value limestone
- 2- Decreased crop production and increased environment load near by area.
- 3-Fuel consumption may also increased.
- 4- Capital Investment for Land acquire & to fulfil land Looser Demand , Necessary Permissions etc. will increased cost of mining & end product. Which is indirect loss of consumer.



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## CONCLUSION :-

- 1- During Exploration & Mining, it is observed that our limestone deposits have minor layer of shale which decreased CaO % in irregular pattern. Similarly MgO % in our deposits has been increased with depth. Which is above 4 to 11%. There for blending of low grade limestone increased mining cost.
- 2-Separate stacking ,Its utilisation in kiln, Blending with high grade limestone of threshold mineral are costly. Which effect cost of our end product.
- 3- Environmental parameters will be also effected .
- 4-There is no sufficient limestone deposits to meet our high grade limestone in nearby mines/lower Vindhyan deposit near Maihar, Satna & Katni belt.
- 5- We are unable to use 100% available limestone of threshold value due to quality & rate, constraint of cement in market.

Therefore we request that limit of threshold value of limestone in lower vindhyan super group may redefined upto Cao-36% & MgO-3.0to 3.3% to meet the cement industry need.





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# Thanks.....