

Subject: Comments on Geological Exploration report and its peer review

Title: Geological report of Jodhpur-Satapar Limestone Block, Dist. Devbhumi Dwarka, Gujarat.

Sr. No.	Peer Review Comments	CGM Comments
1	Basic conventions in map making like 'N' and 'linear scale' should be shown on map. Please see plates. Geographic scales like 1:50,000 etc are sometimes misleading in GR documentation. In the era of digital computerization all maps should have linear scales- otherwise; mistakes are bound to happen due to enlargement or reduction. Hence, shortfalls in map making should be followed as per standard conventions.	Incorporated in maps as suggested
2	Please see page No. 11. Coordinates of drilled boreholes. They have only X (Lat) and Y (Long) values. They have no Z values. Without which very difficult to conceptualize topographic undulations- a basic requirement in mineral exploration.	Incorporated in GR as suggested
3	See the Page No. 18and 19. Few field photographs do not make a Geological map! Please refer to any standard geological map prepared and published by GSI in Gujarat. They have all relevant parameters. A Geological map is a backbone of mineral investigation. An attempt is made to that effect in plate-6. The material presented therein falls short of minimum requirements of geological map for G 3 level UNFC investigation.	Necessary correction incorporated in Geological map and given as Plate 6- Geological Map
4	May I Know the formation name of outcrops in investigated area. Gaj Formation? Bhatia Formation? Or laterite? Not mentioned in the report, to be specified. Proper S/D, faults or joints or folds should be represented. See any standard structural geology text book.	Formation name incorporated in chapter no. 5. The most outcrop observed in the area are of Gaj Formation. Gaj Formation consists of limestone with fossil fragments and clay. The limestone deposit in the Saurashtra region are mostly deposited in coastal region in continuous bedded form, so any kind of structural features like folds and faults are not visible. The most of the area of the block is covered with soil/alluvium. The surface exposures of limestone are very less, therefore some nala cutting and small pits were observed and mapped in the study area. In view of this, structural features like folds and faults are hardly visible in the study area.

5	Nature and number of outcrop samples. Geotechnical values of outcrop or borehole samples if any to be specified. Because of the rock appearance looks fragile. RQD as per ASTM standards is a must on either outcrop sample or core bores.	Incorporated as suggested
6	Core bore samples photos are not documented with labels in the report. Otherwise how to know the clauses of 'transparency' and 'competency' of core drilling in mineral investigation.	Corebox with recovered core photographs incorporated as separate Annexure-8
7	Drilling is precarious! In some boreholes sludge is returned in mineralized zone. Raises fundamental doubt on core recovery percentage and thereby pressure mounts in veracity of Resource estimation !?	Despite implementing advanced core recovery technique, including the use of double tube core barrels and optimized drilling parameters, our efforts to recover intact core samples from Bhatia Formation (clay samples) for soft clay strata was unsuccessful due to the materials high deformability and tendency to collapse. So, that material is written as sludge and this sludge is not count in resource estimation.
8	Panel diagrams mentioned in plates 9 needs to be corrected to an uniform topographic reduced level. Otherwise correlation and lateral continuity of mineralized zone as presented in the report are deceptive and misleading. For, methodology of preparation of stratigraphic panel diagrams please see the book on Stratigraphic principles and practice by "Weller".	The topography of the study area is undulating. Uniform topographic reduced level will give false interpretation.
9	Without proper scaled map of drilled borehole location, very difficult to measure the area of influence for resource calculation. Let the exploration team re-examine the matter and satisfy itself.	Incorporated in all suggested maps
10	Some inconsistent presentations in documentation of the chapter no. 9 and other parts of the report should be improved.	Improved as suggested
11	Modifying factors decipherable in plates 2 and 4 for mining should be evaluated before going for next level of study i.e. G2.	The block area is consisting of private agriculture land and parallel to the national highway NH-51 & SH-6. Looking to the nature of deposits along with quality and quantity of Cement grade limestone and Aluminous laterite and its economical viability if required the private land will be acquired as per the right to fair compensation and transparency in land acquisition act and considering the close proximity of the road mining activities should be carried out with stringent safety barriers and approval of its design in mining plan.