

1 Marble Quarry Road · Marble, Colorado 81623 Tel: 970-704-9002 · Fax: 970-704-9022 · www.coloradostonequarries.com

RECEIVED

March 15, 2012

Russ Means Grand Junction Field Office Division of Reclamation, Mining and Safety 101 South 3rd, Suite 301 Grand Junction, CO 81501 MAR 1 9 2012 GRAND JUNCTION HELD OFFICE DIVISION OF

RECLAMATION MINING & SAFETY

RE: COLORADO YULE MARBLE - 5th PORTAL EXPANSION, M-1999~058, TQ-01

Dear Russ:

Pursuant to conversations you have had with Gary Bascom, the Mine Superintendent for Colorado Stone Quarries, attached is the <u>NEW PORTAL TECHNICAL EVALUATION</u>, prepared by our Geologists.

Please advise of any other information you may need for your review to proceed with you technical revision.

Can you advise when we might expect a response, as we plan to start work on this new entry as soon as the snow melt allows access.

Thank you, COLORADO STONE QUARRIES, INC.

Kimberley Perrin

Faxed to: 970-241-1516 Copy also mailed.

Superceeps FATER Copy of 3/15/12

Owned & Operated By: Locati Luciani Enrico & C.s.a.s. Via Bassagrande 15 · 54036 Marina Di Carrara MS Italy Tel & Fax 0585-630605 · E-Mail: enrico@locatiluciani.it · Partitta va & C.F. 01001300456 MASSIMO GARDENATO Mining engineer

CARLO MUSETTI Geologist

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Colorado Stone Quarries Inc.

NEW PORTAL TECHNICAL EVALUATION Yule Marble Quarry Colorado – U.S.A.

OCTOBER 2011

Technical observations

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Colorado Stone Quarries Inc. plans to open a new exploration gallery for the cultivation of the highest part of the reservoir at an approximate elevation of 9525-9530 ft.

This opening will be near an ancient small research tunnel excavated some decades ago, called "Tunnel # 5". This tunnel is situated at an altitude of about 9550 ft and was excavated to explore the marble deposit in East direction.

The wall exposed at the newly programmed opening (see photo below) consists of bare rock for about 60 feet above the projected working surface and consists of a naked fracture surface cleared from the weather.

Rock is quite competent and formed by marble. All the surface where the new opening will be excavated is clear from other important fractures, which does it mean that the work could be expected safe.

Looking photo #1 it is possible to observe that this kind of superficial natural fractures are parallel to each other for more or less 25-30 ft and disappear inside the rock mass. Geologically speaking this fractures can be interpreted as fractures of relaxation sub parallel to mountainside elongated in NW-SE direction and dipping like mountaiside 60°-65° in E direction.

Due to their direction and being sub parallel to opening direction, they form a sort of arch on the opening roof ensuring this way a good stability of it. This observation and marble good competence ensure together stability of new portal.

New opening will have beginning dimensions of 30 ft width and 18 ft height and will be excavated with cutting technology (see photo #4) so that won't be extra stress due to explosive which is not expected to be used. The result attended after new opening will be similar to one represented in photo #5 taken in Levigliani, near Carrara (Italy).

Anyway is quite simple take a comparison with other existing portal, particularly #3, which are very wider then new one, see i.e. photo #1, and to date can be considered safe although excavated for decades.

Particular attention anyway should be given to the first few meters of excavation progress as near free external surface could form blocks in roof beginning that need bolting or other consolidation operation if other fracture set intersect free surface. This is a normal procedure in all cases in which new openings are excavated and usually are verified after first cut is made and resulting blocks are removed (see photo # 6).

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Attention will also paid to the care of the slope above the tunnel to protect operators acceding the portal entrance from the fall of small rocks due to natural alteration. Usually this is achieved with apposition of protective wire mesh. Every year, after snow disappears, specialized men will clean the slope above the portal removing all removable small rocks.

Due to position of new portal no wooded area is interested from excavation.

2011 October, the 10th

Carlo Musetti, geologist

Carlo Huth

Massimo Gardenato, mining engineer



Photo #1. Approximate position new portal



Photo #2. New opening position



Photo #3. New portal position.



Photo #4. Typical cutting machine in operation for underground openings in marble.

Photo #5. Typical portal in a mountainside (marble quarry in Levigliani, Carrara, Italy)





Photo #6. Typical consolidation application in a new portal in a marble quarry (Carrara, Italy)





